A STUDY TO ASSESS THE PSYCHOLOGICAL PROBLEMS AMONG ADOLESCENTS WITH INTERNET ADDICTION AT SELECTED SCHOOL, RANCHI

BY

301431852

A DISSERTATION SUBMITTED TO THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULLFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

APRIL- 2016

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BY

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APRIL- 2016

DECLARATION

This is to certify that the dissertation entitled **"A study to assess the psychological problems among adolescents with internet addiction at selected school, Ranchi"** is a bonafied work done by **301431852** at Shivparvathi Mandradiar Institute of Health Sciences in partial fulfillment of the University rules and regulations for the award of Master of Science in Nursing under my guidance and supervision during April 2016.

Signature of the Head of the Department

Signature of the Research Guide and the Principal

DECLARATION

I hereby declare that the present dissertation titled **"A study to assess the psychological problems among adolescents with internet addiction at selected school, Ranchi"**, outcome of the original research work undertaken and carried out by me, under the guidance of Research Guide prof. Mrs. M. KAVIMANI, R.N, R.M, M.S.N, Ph.D, Principal, Shivparvathi Mandradiar Institute of Health Sciences, College of Nursing and the Clinical Specialty Guide Miss. KIRUTHIKA R., R.N, R.M, M.S.N, H.O.D of Mental Health Nursing, Shivparvathi Mandradiar Institute of Health Sciences, College of Nursing.

I also declare that the material of this has not found in any way, the basis for the award of any degree/ diploma in this University or any other University.

301431852

CERTIFIED THAT THIS IS THE BONAFIED WORK OF

301431852

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SUBMITTED IN PARTIAL FULLFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING FROM THE TAMILNADU DR. M.G.R MEDICAL UNIVERSITY, CHENNAI.

EXAMINERS:

1. _____

2. _____

_____

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"Behold, children are a heritage from the Lord

The fruit of the womb is His reward."

Psalms 127: 3

Praises and glory to the God Almighty, Who is the source of Strength, inspiration and blessings in every walk of my life and the function of knowledge and wisdom.

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301431852

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LIST OF ABBREVIATIONS

SHORT FORMS	ABBREVIATION
SPMIHS	Shivparvathi Mandradiar Institute of Health Sciences
METAS	Medical Educational Trust Association of Surat
SDA	Seventh-Day Adventist
YDQ	Young's Diagnostic Questionnaire
MASC-T	Multidimensional Anxiety Scale for Children
CES-D	Center for Epidemiological Studies Depression Scale
RSES	Rosenberg Self-esteem Scale
GHQ	General Health Questionnaire
Fig.	Figure
H_1	Research Hypothesis
M.Sc (N)	Master of Science In Nursing
N	Total number of sample
No	Number
P	Probability
f	Frequency
%	Percentage

SD	Standard Deviation
χ^2	Chi-square
IAT	Internet Addiction Test
DAS	Depression, Anxiety, Stress
UCLA	University of California, Los Angeles
PSQI	Pittsburgh Sleep Quality Index


RESEARCH
EXAMINE
PROBE
PROJECT
SCAN
SCIENCE
PROBE
EXPERIMENTATION
KNOWLEDGE
PRACTICE
EXPERIMENTATION
FACTS
LINK
SCIENCE
PROBE
THINK
EXPERIMENT
LEARNING
TEACHING
SEARCH
CHECK
PROJECT
BOOK
SCIENCE
PROOF
METHOD
STOCK
ASK
LINK
EXAMINE
EXAMINATION
SOURCE
EDUCATION

Abstract

ABSTRACT

A study to assess the psychological problems among adolescents with internet addiction at selected school, METAS of SDA Higher Secondary School, Ranchi, was done by 301431852 as a partial fulfillment of the requirement of the degree of Master of Science in Nursing at Shivparvathi Mandradiar Institute of Health Sciences, under the Tamilnadu Dr. M.G.R Medical University, Chennai, April 2016.

The objectives of the study were

1. To assess the level of internet addiction among adolescents with internet addiction in selected school.
2. To assess the selected psychological problems among adolescents with internet addiction.
3. To find out the association between internet addiction and selected demographic variables among adolescents.
4. To find out the association between selected psychological problems and their selected demographic variables among adolescents with internet addiction.
5. To find out the correlation between the internet addiction and selected psychological problems among adolescents with internet addiction.

Hypothesis formulated were

H_1: There is a significant relationship between the level of internet addiction and selected psychological problems among adolescents with internet addiction.

H_2: There is a significant association between the level of internet addiction and selected demographic variables among adolescents with internet addiction.

The conceptual framework of the study was developed based on LV Bertalanffy's General System Theory (1968). The investigator organized the review of literature under two sections, as follows: Studies related to Prevalence and factors of internet addiction among adolescents & Studies related to Psychological problems among adolescents with Internet Addiction. The research design was a descriptive survey design. The data collection tools were validated by Nursing experts and Psychologist. Reliability was established by Inter rater method. The reliability was found to be r=0.82 for Internet Addiction Scale, r=0.75 for DAS Scale, r=0.73 for UCLA Loneliness scale and r=0.72 for Modified PSQI Scale. 100 samples for the study were chosen using purposive sampling technique. Background factors of each sample were collected by structured interview schedule. The setting was at METAS of SDA Higher Secondary School, Ranchi. DAS Scale, UCLA Loneliness Scale and Modified PSQI Scale were used. The data collected was edited, tabulated, analyzed and interpreted manually with the help of statistician. There was partially positive correlation between the level of internet addiction and the selected psychological problem such as feeling of depression, anxiety, stress, loneliness and low quality of sleep. The conclusion of the study was that most of the adolescents with internet addiction had psychological problems, majority of them were suffering with low quality of

sleep, followed by feeling of loneliness, stress, depression and anxiety respectively. The implications, limitation, recommendation and conclusion were clearly spelt.

Chapter-I

Introduction

CHAPTER-I

INTRODUCTION

"Adolescence is such a fun time in your life, because you think you know it all, and you haven't gotten to the point where you realize that you know almost nothing."

— Anthony Kiedis

Internet is largely seen as one of the world's biggest technology platform. It is a source of knowledge, entertainment, brand building, commerce, education and much more. The use of the internet on school campuses and in society has increased dramatically in recent years. Whereas the academic use of the internet is primarily intended for learning and research, the internet has also become an important part of student life. However, from time to time, cases of over involvement with the internet have been observed on different campuses.

BACKGROUND OF THE STUDY

Internet, which has over the years changed the way we live, work and communicates, also has a darker side: Addiction. Internet addiction has been a headache for several Asian countries- like South Korea and China-over the past

decade. The South Korea government recently estimated that the country has 2.55 million citizens addicted to the internet. Nearly, 50 percent of teenaged delinquents in South China's Guangdong province are said to be internet-dependent. Though Asia has only 16% of population of the world, 48.4% of total internet users are Asian which is great.

As early as in 1976, the year after the internet came into being; the **American psychological association(APA)** had anticipated that the internet would potentially lead to addiction behavior among users. The term "internet addiction" was proposed by Dr. Ivan Goldberg in 1995 for pathological compulsive internet use.

Internet addiction is an impulse control disorder. Some internet users may develop an emotional attachment to on-line friends and activities they create on their computer screens. Internet users may enjoy aspects of the internet that allow them to meet, socialize and exchange ideas through the use of chat rooms, social networking websites or "virtual communication". Other internet users spend endless hours researching topics of internet online or "blogging". Many services are now provided on the internet such as online banking, job seeking, purchasing tickets for your favorite movies, guidance services on array of topic engulfing the every aspects of life, and hotel reservations. Often these services are not available off-line and can cost more.

Young (1998) stated that Internet Addiction Disorder (IAD) is a modern day addiction. Persons with IAD can exhibit symptoms, suffer drawbacks and face consequences that are similar to individuals addicted to alcohol, gambling, narcotics, shopping and other compulsive behaviors. One way to describe persons infected with this disorder is that they find the virtual environment than everyday

reality. Their daily lives are dominated with their need to be online. Sadly, this addiction is affecting millions of adolescents and their families in every aspects of their life. The primary areas affected include school, family, work and relationships.

Internet addiction is defined as a psychological dependence on the internet and characterized by (a) an increasing investment of resources on internet-related activities, (b) unpleasant feelings (e.g. Anxiety, depression, emptiness) when offline, (c) an increasing tolerance to the effects of being online, and (d) denial of the problematic behaviors.

Excessive time spent online often results in the neglect of familial social activities and interest. The term cyber window has been used to refer to the neglected partners of internet addicts. Internet addiction can lead to poor academic performance in school and college and impaired functioning at work. Employers have found employees with access to internet at their desks spend a considerable amount of their working time in non-work-related internet use. Psychosocial consequences of internet addiction include loneliness, frustration and depression. Although not very common, some addicts who spend very long hours on the internet also experience physical problems such as fatigue related to sleep deprivation, back-ache and carpal and radial tunnel syndromes.

A systematic literature review was conducted by means of Medline, Lilacs, SciELO and Cochrane using the following terms as a parameter: “Internet Addiction”, “Pathological Internet use”, “Internet Abuse”, and “Electronic games”. The electronic search was done up to December 2007. The result discuss that, studies conducted in distinct countries still indicate very different prevalence rate. Many patients reporting abusive use and dependence show significant

consequences to their professional, academic, social and family lives. Further investigations are needed to determine this abusive internet and electronic game use should be understood as one of the newest psychiatric classifications of the 21st century or just substrates of others.

Pennsylvania hospital, Bradford Regional Medical Center, has become the first in the U.S. to treat Severe Internet Addiction through a 10-days inpatient program. Patients admitted to the voluntary behavioral health treatment center must first undergo a "digital detox" that prohibits internet use for at least 72 hours, followed by therapy sessions and educational seminars to help them get their Internet Compulsive under control**. (ABC News report, September, 2013)**

Kimberly Young (2013) Defined Internet Addiction by the consequences of the internet overuse rather than the number of hours spent online. There was difference between people who depended on modern technology but could balance their online life with their offline life, and people whose obsession prevented them from functioning normally. Like any other addiction, we look at whether it has jeopardized their career, whether they lie about their usage or whether it interferes with relationships. Internet addicts were young, male and highly intelligent. They often struggle socially and have low-self esteem.

As a matter of fact, internet over use in nature, no different from other forms of addictions- like alcoholism, gambling, shopping, day trading, watching television serials, reading cheap romance novels, sex, among a thousand things. The problem does not lie in all the activities themselves, but the intemperate length of practice. Regulators cannot stop people from getting drunk, but they can- and should- stop the inebriated from driving, as it will harm others. Likewise, the government cannot close all shops because some shopaholics ruin their family

finances. Even the most beneficial thing, if carried to an extreme, will have negative consequences.

Dr. Sree Jadapalle (2014) To date, very few neuroimaging studies have been performed to investigate the brain structural and functional changes with internet addiction among the at-risk population of adolescents. This is unfortunate, because youth represents our future generation. Screening of internet addiction disorder among adolescents with mental health problems is important, given the increasing prevalence of suicidal behavior in this age group. There are not yet any guidelines for treating this condition. However, considering its significant correlation with depression, selective serotonin reuptake inhibitors may alleviate symptoms. South Asian countries have some detox centers for internet addiction that use some psychotherapeutic interventions.

As the internet increasingly becomes part of our lives, Internet Addiction Disorder has received much attention. Internet addicts may withdraw from social and interpersonal interactions other than those on the internet. Their family relationships and academic or occupational functioning may deteriorate. Several withdrawal symptoms have been identified, including nervousness, agitation and aggression, as well as an addiction syndrome that includes the presence of withdrawal symptoms, increasing tolerance and loss of control. A high rate of co-morbid mental disorder has also been reported, especially depressive symptoms and social impairment.

NEED FOR THE STUDY

There has been an explosive growth in the use of internet not only in India but also worldwide in the last decade. In India, use of internet is enormous, especially in the young population. The number of internet users worldwide was 2,925,249,355 in 2014. India is having third largest online population says a report. Internet has been perhaps the most outstanding innovation in the field of communication in the history of mankind. As with every single innovation, internet has its own advantages and disadvantages, but usually greater magnitude of advantages outweighs its advantages.

As the internet increasingly becomes part of our lives, internet addiction disorder has received much attention. Internet addicts may withdraw from social and interpersonal interactions other than those on the internet. The family relationships and academic or occupational functioning may deteriorate. Several withdrawal symptoms have been identified including nervousness, agitation and aggression, as well as an addiction syndrome that includes the presence of withdrawal symptoms, increasing tolerance and loss of control. The internet was originally designed to facilitate communication and research activities. However, the dramatic increase in the use of the internet in recent years has led to pathological use (internet addiction).

An internet user is defined as an individual who has access to the internet at home, via computer or mobile device. In 2014, nearly 75% (2.1 billion) of all internet users in the world live in the top 20 countries. The remaining 25% (0.7 billion) is distributed among the other 178 countries, each representing less than 1% of total users. China, the country with most users (642 million in 2014),

represents nearly 22% of the total, and has more users than the next three countries combined (United States, India and Japan). Among the top 20 countries, India is the one with the lowest penetration: 19% and the highest yearly growth rate. The use of internet, especially online social network is fast rising in India. In 2015, India had 277.4 million internet users. As of 2014, India was the third-largest online market with more than 198 million internet users, ranked only behind China and the United States and declaring itself as a market not to be ignored on the global stage.

Many of the Indian Institutes of Technology (IIT) are restricting campus internet use during night hours, because of recent suicides being linked to the presumed anti-social behavior that internet use promotes. However, it is clear that internet addiction is more of a symptom than a cause of greater social problems. Such an authoritarian move may not prove adequate enough to address the large problems students face in dealing with stress of being in these high-pressure institutions in the context of a highly competitive global economy.

Online activities which, if done in person, would normally be considered troublesome, such as compulsive gambling or shopping, are sometimes called net compulsions. Others, such as reading or playing computer games, are troubling only to the extent that these activities interfere with normal life. The internet has unique psychological properties which induce dissociation, time distortion and instant gratification

Over 60% of people seeking treatment for internet addiction disorder claim involvement with sexual activities online which they consider inappropriate, such as excessive attention to pornography or involvement in explicit sexual conversations online. More than half are also addicted to alcohol, drugs, tobacco

or sex etc. People who develop problems with their internet use may start using internet on casual basis and then progress to using the technology in dysfunctional ways. Use of internet may interfere with the person's social life, school work or job-related tasks at work.

An article published in an online edition of Hindu newspaper said that excessive computer use can lead to sleep deprivation and restlessness apart from the physical problems such as backache and eyestrain. Such addicts don't care for relations, tell lies and also to stealing sometimes.

According to the center for Internet Addiction Recovery, Young, a researcher who has lobbied for the recognition of net abuse as distinct clinical disorder, "internet addicts suffer from emotional problems such as depression and anxiety-related disorders and often use the fantasy world of the internet to psychologically escape unpleasant feelings or stressful situations."

Dr. Sree Jadapalle (2014) studied the prevalence of Internet Addiction Disorder among American youth was about 26.3%, which is huge. That's actually more than alcohol and illicit drug use disorders. Internet addiction is also associated with changes in blood flow. Increased blood flow is actually seen in the area of the brain involving reward and pleasure centers and decreased blood flow is observed in areas involved in hearing and visual processing. Internet addiction is also linked to dopamine changes studies indicated that prolonged internet use leads to a reduction in dopamine transporters, the effects of which are stagnation of dopamine in the synaptic cleft. The resulting of excess dopamine causes stimulation of adjacent nervous, which may result in a euphoric effect.

Investigator has personal experience how dangerous is this situation because of dysfunctional and pathological ways of using internet other than educational purpose. It can be a nightmare, however investigator is aware of the psychological problems. For that reason investigator is interested to create awareness among adolescents. Hence, there is need to assess the internet addiction and its impact among adolescents. These instances provoked the investigator to select the study on assessment of psychological problems among adolescents with internet addiction at selected school.

STATEMENT OF THE PROBLEM

A study to assess the psychological problems among adolescents with internet addiction at selected school, Ranchi.

OBJECTIVES OF THE STUDY

6. To assess the level of internet addiction among adolescents with internet addiction in selected school.
7. To assess the selected psychological problems among adolescents with internet addiction.
8. To find out the association between internet addiction and their selected demographic variables among adolescents.
9. To find out the association between selected psychological problems and their selected demographic variables among adolescents with internet addiction.

10. To find out the correlation between the internet addiction and selected psychological problems among adolescents with internet addiction.

RESEARCH HYPOTHESIS

H_1: There is a significant relationship between the level of internet addiction and selected psychological problems among adolescents with internet addiction.

H_2: There is a significant association between the level of internet addiction and selected demographic variables among adolescents with internet addiction.

OPERATIONAL DEFINITION

Assess

In this study it refers to measure the psychological problems of adolescents with internet addiction.

Internet addiction

It is the problematic use of internet, including the various aspects of its technology, such as electronic mail(e-mail) and the World Wide Web(www).

In this study internet addiction refers to excessive use of internet other than educational purpose, for seeking pleasure or gratification such as social networking gaming, gambling, online chatting and cyber pornography.

Psychological problems

It refers to emotional disturbance like feeling of depression, anxiety, stress, loneliness and low quality of sleep.

Adolescents

It refers to a boy or girl between age group 13-18 years.

ASSUMPTIONS

1. Adolescents use internet excessively for the entertainment and social networking.
2. Internet addiction students may have psychological problems due to over usage of internet.

DELIMITATION

- The study is limited to students who are using internet daily.
- The study is limited to students studying in METAS of SDA Higher Secondary school, Ranchi.
- The study is limited to students who are present at the time of date collection.

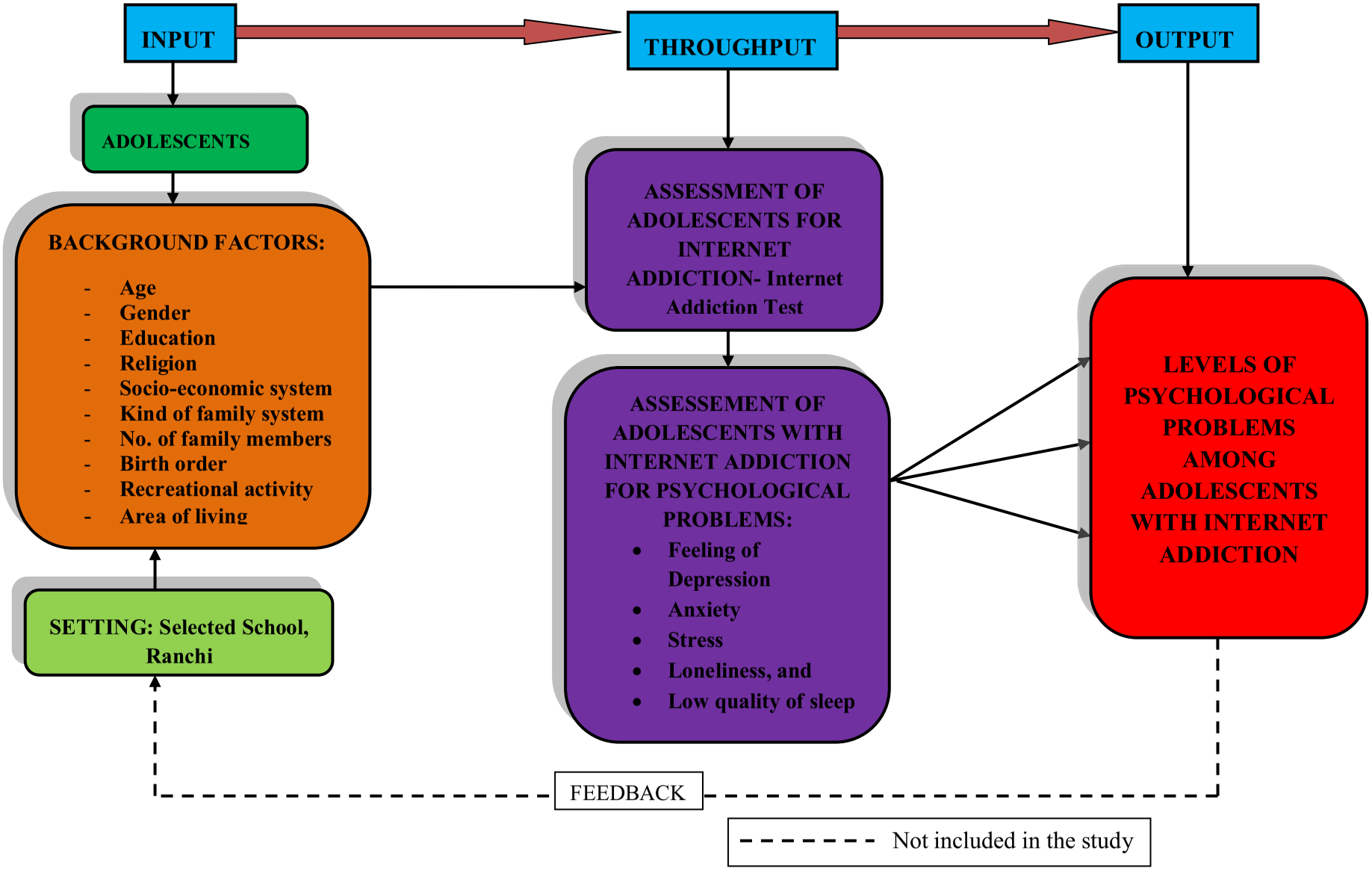
CONCEPTUAL FRAMEWORK

A conceptual framework or model refers to a set of concept and assumption that integrate them into a meaningful configuration.

Polit and Hungler (2012) states that conceptual framework is interrelated concepts or abstractions that are assembled together in some rational scheme be their relevance to a common theme. A framework may serve as a spring board for scientific advancement.

A conceptual framework is a concept, which is a mental image of a phenomenon. Those concepts are linked together to express the relationship between them. It guides the researchers to know what data has to be collected and provides direction to the whole research process.

The conceptual framework for the present study is developed based on LV Bertalanffy's General System Theory (1968).


INPUT
THROUGHPUT
OUTPUT
ADOLESCENTS
BACKGROUND FACTORS:
- Age
- Gender
- Education
- Religion
- Socio-economic system
- Kind of family system
- No. of family members
- Birth order
- Recreational activity
- Area of living
SETTING: Selected School, Ranchi
ASSESSMENT OF ADOLESCENTS FOR INTERNET ADDICTION- Internet Addiction Test
ASSESSEMENT OF ADOLESCENTS WITH INTERNET ADDICTION FOR PSYCHOLOGICAL PROBLEMS:
• Feeling of Depression
• Anxiety
• Stress
• Loneliness, and
• Low quality of sleep
LEVELS OF PSYCHOLOGICAL PROBLEMS AMONG ADOLESCENTS WITH INTERNET ADDICTION
FEEDBACK
Not included in the study

Chapter-II

Review of literature

CHAPTER II

REVIEW OF LITERATURE

"A great literature is chiefly the products of inquiring minds in revolt against the immovable certainties of nation."

Meckem H.C.

Good research does not exist in vacuum. Research findings should be an extension of previous knowledge and theory as well as guide for further research activity. In-order for a researcher to build an existing work, it is essential to understand what is already known.

Review of literature is an essential component, a worthwhile studying in any field of knowledge. It helps the investigator to gain information on what has been done previously and to gain deeper insight into the research problems. It also helps to plan and conduct the study in a systematic and scientific manner. Links between new research topic and existing knowledge are generally developed by a through review of prior research on a topic and then by developing a framework for the topic on the basis of what is studied.

PILOT and HUNGLER (2012) states that literature review is an important step in the development of research project. It provides reader with a background for understanding of what has already been learnt to illuminate what the significant of the new study. Review of literature provides the concept to further evolves understanding of the status of problem area clues to research approach, method, instrumentation and data analysis. The review of literature for the study has been from published articles, textbooks, reports and medline search and it is organized as follows:

1. Studies related to prevalence and factors of internet addiction among adolescents.
2. Studies related to psychological problems among adolescents with internet addiction.

1. Studies related to prevalence and factors of internet addiction among adolescents.

Ahmadi K, et.al, (2014) conducted a nationwide descriptive study on factors of internet addiction in Iran. Overall 4500 students of high school or pre-college schools from 13/31 provinces of Iran by a cluster sampling method and 4342 (96%) participated. Two self-rated questionnaires demographics and Young's Internet addiction scale were filled by the participants. Data were analyzed by SPSS software. The study reported 962 (22.2%) of the study participants were labeled as having internet addiction. Male were significantly more likely to be an internet addict ($p<0.001$). Students whose father and/or

mother had a doctorate degree were most likely to have internet addiction (P<0.001 for both). Job engagement of mothers was significantly associated with students' internet addiction, and the least rate of addiction was observed when mother was housewife (P<0.001); having no exercise was associated with the highest rate of internet addiction (P<0.001). The study concluded that internet addiction in Iranian adolescents was prevalent and has several independent factors, from which family relations is more likely to be modifiable.

Puharic Z, et.al, (2014) conducted a descriptive study on factors of internet addiction. The aim of the study was to explore the characteristics of internet use in the Bjelo-var-Bilogora country, to evaluate gender and socio-demographic difference, and to examine predictors of internet addiction among elementary school eighth-graders. The study included 437 (female 51%) eighth-graders with the mean age 13.8±0.5 years. An anonymous questionnaire was used to measure the participants' internet use and their sign of internet addiction. The study reported, majority of children (71.5%) were using internet everyday, 32% of children almost always stayed online longer than intended, 13% of boys and 4% of girls almost neglected chores to spend more time online and 51.7% of children thought their life would be boring and uninteresting without internet. In terms of the function for which they used the internet, they were mostly in on-line community/chat websites (70%), to listen to music and watch movies (81%), and boys in gaming websites. Most of the students (43.4%) spent 1-2 hours daily on-line, 26.2% of students spent 3-4 hours on-line, and 9% spent more than 5 hours daily on-line. The study concluded that more public health prevention measures should be conducted to raise public awareness and concern about the negative effect of internet use and internet addiction, especially in the young population.

Tang J, et.al, (2014) conducted the study to estimate the prevalence of internet addiction and its association with stressful life events and psychological symptoms among a random sample of school students who were internet users (N=755) in Wuhan, China. Internet addiction, stressful life events, coping style and psychological symptoms were measured by self-rated scales. The study reported that prevalence rate of internet addiction was 6.0% among adolescent internet users. Logistic regression analyses indicated that stressors from interpersonal problem and school related problem and anxiety symptoms were significantly associated with internet addiction after controlling demographic characteristics. The study concluded that high prevalence of internet addiction among Chinese adolescent internet users and stressors from interpersonal problem and school related problem as a risk factors for internet addiction.

Park S, et.al, (2008) conducted a descriptive study on prevalence of internet addiction and to explore the family factors associated with internet addiction. The study participants were middle and high school students residing in Seoul, South Korea. 903 adolescents participated in the study. 10.7% of adolescents scored at least 70 on the internet addiction scale and were considered at high risk for internet addiction. The results indicated that parenting attitudes, family communication, family cohesion and family violence exposure were associated with internet addiction. The study concluded that families play an important role in preventing internet addiction.

Xu J, et.al, (2012) conducted a exploratory descriptive study to explore the prevalence of Adolescent Internet addiction (AIA) and associated symptoms in a large population-based sample in Shanghai, and to identify potential predictors related to personal characteristics. 5,122 adolescents from 16 high schools participated in the study. Each student completed a self-administered and

anonymous questionnaire that included DRM 52 scale of internet use. The results reported 449 (8.8%) were identified as internet addicts. Adolescents Internet Addiction was higher among those adolescents who were male, senior high school students, or had monthly spending >100 RMB (all p-value <0.05). The study concluded that adolescent personal factors play key roles in inducing Adolescent Internet Addiction.

Krajewska-kutak E, et.al, (2011) conducted a descriptive study on internet addiction among students of medical university in Baitystok. 358 students nursing (n=232), midwifery (n=71) and medical rescue (n=55) participated in the study. The tool used was Young Internet Addiction Test. All respondents spent 1.8± 1.3 hours daily online. The internet addiction test score reported 24 (10.35%) nursing, 7 (9.9%) midwifery and 5 (9.1%) medical rescue students had internet addiction. The abstinence syndrome was noted among 11 (4.7%) nursing, 7 (9.9%) midwifery and 7 (12.7%) medical rescue students. The study concluded that several students had internet addiction as well as abstinence syndrome.

Seo M, et.al, (2009) conducted a cross-sectional study on internet addiction and interpersonal problems, to explore the relationship between the two, and identify the relevant factors of internet addiction among Korean middle school students. 676 middle school students participated. The tools used were Korean version of Internet Addiction Self-test scale and Korean version of the Inventory of Interpersonal problems. The test scores reported, 547 (80.9%) were general users, 108(16%) were potential risk users and 21 (3.1%) were high risk users. There were statistically significant positive correlation between internet addiction and interpersonal problems (r=0425, P=.000). There were significant positive correlation between internet addiction and hours spent playing games. The study concluded that internet-addicted adolescents had more interpersonal problems.

Lam L.T, et.al, (2009) conducted a population-based cross-sectional study on factors associated with internet addiction among high school students in Guangzhou city, China. High school students, aged 13-18 years, registered on the secondary school registry participated in the study. Stratified random sampling technique was used. The tools used were Internet Addiction Test (IAT) and Self-rating Depression Scale. The internet addiction test scores reported 89.2% normal users, 10.2% moderately and 0.6% severely addicted to internet. Results from the multivariate logistic regression analyses suggested a 50% increased odds for males to be addicted to the internet (OR=1.5, 94% CI=1.1-2.2) when compared to females. Other potential risk factors included drinking behavior (OR=2.4, 95% CI=1.1-2.8), family dissatisfaction (OR=2.4, 95% CI=1.3-4.3) and experience of recent stressful events (OR=10.0, 95% CI=6.5-12.2). The study concluded that stress-related variables were associated with internet addiction.

Ni X, et.al, (2009) conducted a study on prevalence of internet addiction and influential factors associated with internet addiction among freshmen college students in China. A total of 3557 first year university students participated in the study. The tools used were Young's 20 item Internet Addiction Test (IAT), Self-rating Depression Scale (SDS) and Self-rating Anxiety Scale (SAS). A rate of 6.44% of the participants surveyed showed internet addiction. The students with internet addiction had higher scores of SDS and SAS compared with those without internet addiction ($p<0.01$). There were significant positive correlation between SDS and SAS scores and internet addiction ($p<0.01$). Multiple logistic regression analyses showed that a single-parent family, the age of first exposure to internet use, the age of the student, city residence and homesickness were significantly associated with internet addiction ($p<0.01$). The study concluded that depression, anxiety and other influential factors were associated with internet addiction.

Siomos K.E, et.al, (2008) conducted a study on prevalence of internet addiction among adolescents in Thessaly, Greece. The sample of 2,200 students, aged 12 to 18 years, from 120 classes among 85 schools participated in the study. The sample included 10% of all classes in schools of Thessaly. The method of randomized stratified selection in every school was used for its constitution. The tool used was Diagnostic Questionnaire for Internet Addiction. In Greece, 70.8% of adolescents had access to Internet. The prevalence of internet addiction among internet users of Central Greece was 8.2%. The most frequent type of internet use was online games, representing 50.9% of internet users, and information services, representing 46.8%. The study concluded that mainly male students who play online games and visit internet cafes were internet addicts.

Ghassemzadeh L, et.al, (2008) conducted a comparative study on prevalence of internet addiction and comparison of internet addicts and non-addicts among high school students in Iran. A total of 1968 high-school students were selected randomly through clustering. The tools used were the Internet Addiction Test (IAT), UCLA Loneliness scale, Rosenberg self-esteem scale and Matson Evaluation of Social skills. Off the sample, 977 students as internet users, who were classified into 37 internet addicts, 304 possible internet addiction and 636 moderate users. The study concluded that internet addicts were lonelier, have lower self-esteem and poorer social skills than moderate users, but not necessarily than possible addicts or non users.

Li Y, et.al, (2014) conducted a study on prevalence of internet addiction in a nationally representative sample of Chinese elementary and middle school students and to investigate internet addiction among internet users with different

usage in China. The data were from the National Children's Study of China, in which 24,013 students 4th to 9th grade from 100 countries in 31 provinces of China participated in the study. The tool used was Young's Diagnostic Questionnaire (YDQ). The test scores reported the prevalence of internet addiction was 6.3% and internet user was 11.7%. Among the internet users, males (14.8%) and rural students (12.1%) reported internet addiction more than females (7.0%) and urban students (10.6%). The percentage of internet addicts in elementary school students (11.5%) was not significantly lower than the percentage of middle school students (11.9%). The study concluded that percentage of internet addicts was highest in adolescents typically surfing in internet cafes and playing internet games.

Sasmaz T, et.al, (2012) conducted a cross-sectional study on prevalence and risk factors of internet addiction among high school students in Mersin Province. A total of 1156 high school students participated in the study, among whom 609 (52.7%) were male with mean age of 16.1± 0.9 years. The test scores reported that 79% of students had computer at home and 64.0% had home internet connection. 175 (15.1%) students were internet addicts. The addiction rate was 9.3% in girls and 20.4% in boys ($p<0.001$). The study concluded that prevalence of internet addiction was high among high school students.

Goel D, et.al, (2013) conducted a cross-sectional study on prevalence of internet addiction and associated existing psychopathology among adolescents in Mumbai, India. A total of 987 students, 681 female and 306 males of various faculties across the city of Mumbai participated in the study. The tools used were specially constructed semi-structured Performa and the Internet Addiction Test (IAT; Young, 1998). The test score reported that 74.5% were moderate users and

0.7% were internet addicts. Those with excessive internet use had high scores on anxiety and depression. The study concluded that students experienced anxiety and depression due to excessive internet use.

Xie Y.B, et.al, (2010) conducted a descriptive study on prevalence of internet addiction and factors contributing to internet addiction among middle school students in Guangzhou, China. Cluster sampling method was used to recruit an urban middle school, a rural junior middle school and a rural senior high school to conduct survey. The tools used were stressful life events questionnaire, the trait oriented coping styles questionnaire and the internet addiction test. The test scores reported 89.2% were normal user of internet, 10.2% moderate users and 0.6% severe addiction. The factors contributing to internet addiction included passive coping styles, male gender and stressful life-event experienced in family and interpersonal communication. The study concluded that incidence of internet addiction was high in middle school students in Guangzhou.

Poli R, et.al, (2012) conducted a study on prevalence of internet addiction disorder among high school students attending secondary institutions in the district of Cremona and to assess any difference concerning variables such as gender, age, place of residence and kind of school attended in Italy. A total of 2533 students from different schools participated in the study. The tools used were social and demographic questionnaire and Internet Addiction Test (IAT). The internet addiction test score reported 94.19% were normal users of internet, 5.01% moderately addicted and 0.79% seriously addicted. Significant differences in gender and in kinds of school were found. No statistical differences were revealed

in age and urban or rural conditions. The study concluded that there was high prevalence of internet addiction disorder.

2. **Studies related to psychological problems among adolescents with internet addiction.**

Yadav P, et.al, (2013) conducted a preliminary study on internet addiction and its correlation with socio-educational characteristics, internet use patterns and psychological variables namely depression, anxiety and stress among Indian school students of class 11^{th} and 12^{th} in Ahmedabad, India. 621 students of six English medium schools of Ahmedabad participated in the study, of which 552 (88.9%) who completed forms were analyzed. The tools used were Young's Internet Addiction Test, 21 items Depression Anxiety and stress Scale and psychological variables. The test scores reported 65 (11.8%) students had internet addiction and there was strong positive correlation between internet addiction and depression, anxiety and stress. The study concluded that internet addiction was positively correlated to depression, anxiety and stress.

Ozturk C, et.al, (2015) conducted a cross-sectional descriptive study to analyze the association of personality traits and internet addiction among adolescents in Turkey. 328 adolescents attending two high schools in the Aegean region of Turkey participated in the study. The students had an average age of 16.43± 1.47 years and 40.5% were female. The tools used were socio-demographic information questionnaire, Internet Addiction Scale and Adjective Based Personality Scale. The percentage of subjects at risk of internet addiction

was 15.9% (n=52) and 42.4% (n=22) of them reported that the amount of time they spent online was acceptable. The study determined that participants risk of internet addiction was associated with their levels of extraversion and openness to experience.

Park S, et.al, (2013) conducted a descriptive study on association between problematic internet use and depression, suicidal ideation and bipolar disorder symptoms in Korea. A total of 795 middle and high school students participated in the study. The Internet Addiction Scale for youth-short Form (KS-scale) was used. 75 adolescents (9.4%) met the criteria for problematic internet use. The presence of problematic internet use was significantly associated with suicidal ideation (OR=5.82, 95% CI=3.30-10.26) as well as depression (OR=5.00, 95% CI=2.88-8.66). There was a marginally significant associated between problematic internet use and probable bipolar disorder. The study concluded that there was a complex transactional relationship between problematic internet use, depressive symptoms, bipolar symptoms and suicidal ideation.

Jang K.S, et.al, (2008) conducted a study on factors associated with internet addiction and to examine the psychiatric symptoms among Korean adolescents in Seoul, South Korea. 912 students of 7^{th}-12^{th} grades from 2 junior schools and 2 academic senior high schools located in Seoul participated in the study. The tools used were the Internet-related Addiction Scale and the Symptoms checklist-90-revision. Approximately 30% (n=258) of subjects showed intermittent internet addiction and 4.3% (n=37) internet addiction. Multivariate logistic regression analysis showed that junior high school students and students having longer period of internet use were significantly associated with intermittent

addiction. When the demographic and internet-related factors were controlled, obsessive-compulsive and depressive symptoms were found to be independently associated factors for intermittent addiction and addiction to internet, respectively. The study concluded that there was a significant association between internet addiction and psychiatric symptoms namely obsessive-compulsive and depressive symptoms.

Cao H, et.al, (2011) conducted a cross-sectional study to estimate the prevalence of problematic internet use and its relation to psychosomatic symptoms and life satisfaction among adolescents in mainland China. 17,599 students of eight cities of China participated in the study. The tools used were Young Internet Addiction Test (YIAT), the Multidimensional Sub-health Questionnaire of Adolescents and the Multidimensional students' Life Satisfaction Scale. 8.1% of subjects showed problematic internet use. Compared with normal internet users, adolescents with problematic internet use were more likely to suffer from psychosomatic symptoms ($p<0.001$), including lack of physical energy, physiological dysfunction, weakened immunity, emotional symptoms, behavioral symptoms and social adaptation problems. Adjusted for the demographic and internet-related factors, there was positive significant relationship between problematic internet use and psychosomatic symptoms, but negatively related to life satisfaction. The study concluded that there was significant association between problematic internet use and psychosomatic symptoms.

Fu K.W, et.al, (2010) conducted a study with an aim to examine the prevalence of internet addiction, to test its differentiation from other correlates and to examine its relationships with correlates among adolescents in Hong Kong,

China. 208 adolescents, aged 15-19 years participated in the study. The participants were asked to self report their pattern of internet usage, symptoms of internet addiction, suicidal ideation, psychiatric symptoms and psychosocial conditions. The prevalence rate for having five or more symptoms of internet addiction was estimated to be 6.7%. Positive dose-response relationships were found between the number of symptoms of internet addiction and 1-year changes in score for suicidal ideation and depressive symptoms. The study concluded that specificity of internet addiction and its symptoms seem to co-occur with individuals' suicidal ideation and depressive symptoms.

Yen C.F, et.al, (2014) conducted a descriptive study on association of severity of internet addiction symptoms with various dimensions of anxiety, depression symptoms and self-esteem among adolescents with Attention-deficit/hyperactivity disorder (ADHD) among adolescents in Taiwan. 287 adolescents aged between 11 and 18 years participated in the study. The tools used were the Chen Internet Addiction Scale, Multidimensional Anxiety Scale for children (MASC-T), the center for Epidemiological Studies Depression Scale (CES-D) and the Rosenberg Self-esteem Scale (RSES). The anxiety test score reported higher physical symptoms and lower harm avoidance. Depression test score reported higher somatic discomfort and self-esteem test score reported lower self-esteem. The study concluded that anxiety, depression and self-esteem were significantly associated with more severe internet addiction symptoms.

Lin I.H, et.al, (2014) conducted a cross-sectional study on association of suicidal ideation and attempt with internet addiction and internet activities among adolescents in Taiwan. 950 adolescent students aged 12-18 years participated in

the study. The tools used were Kiddies' Schedule for Affective Disorders and Schizophrenia and Chen Internet Addiction Scale. The kinds of internet activities were also recorded. The suicidal ideation test score for the Taiwanese adolescents reported that internet addiction was significantly associated with suicidal ideation and suicidal attempt. The study concluded that adolescents with internet addiction have higher risk of suicidal ideation and attempt than those without internet addiction.

Canan F, et.al, (2012) conducted a descriptive study on association between internet addiction and dissociative symptoms among college students in Turkey. 1034 students aged between 18 to 27 years participated in the study. The tools used were Internet Addiction Scale, Dissociative Experiences Scale and socio-demographic query form. The Internet Addiction Test score reported 9.7% were internet addicts. The Pearson Correlation analysis results revealed a significant positive correlation between dissociative symptoms and internet addiction ($r=0.220$; $p<.001$) and weekly internet use ($r=0.227$; $p<.001$). Levels of internet addiction were significantly higher among male students than female students ($p<.001$). The study concluded that excessive internet use is associated with higher level of dissociative symptoms.

Koyuncu, et.al, (2012) conducted a cross-sectional study on assessment of internet addiction and loneliness among secondary and high school students in Sivrihisar, Anatolia, Turkey. 1157 students, 636 males and 521 females, aged 11 to 19 years participated in the study. The tools used were Young's Internet Addiction Scale and University of California, Los Angeles (UCLA) Loneliness Scale. The internet addiction test score reported that 7.9% were addicted to internet. Obesity (odds ratio: 9.57), "type A" personality (odds ratio: 1.83), first

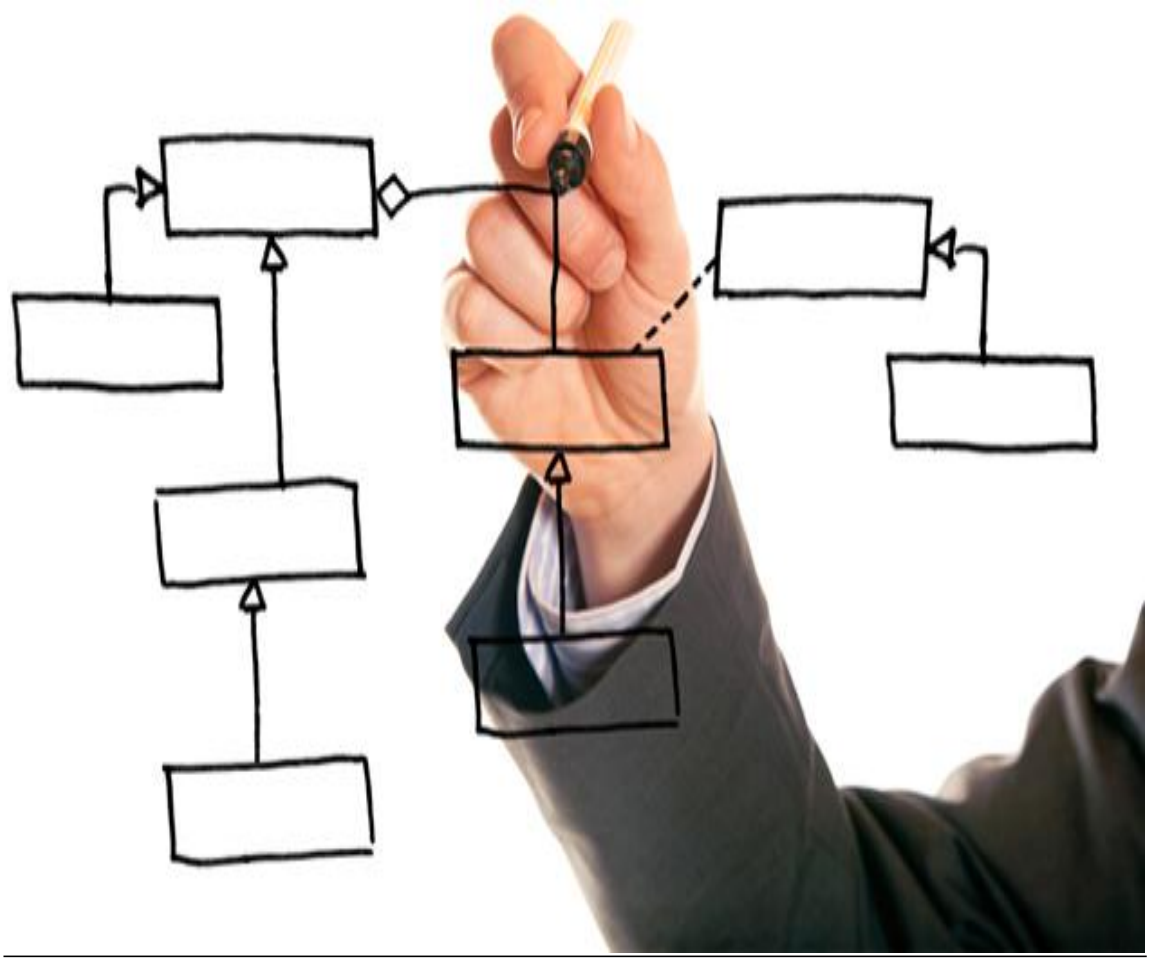
time usage of internet before age 12 (odds ratio: 2.18), using internet everyday (odds ratio: 2.47) and use internet more than 2 hours a day (odds ratio: 4.96) were risk factors of internet addiction ($p<0.05$). A positive correlation was found between internet addiction and loneliness ($p<0.001$). The study concluded that there was positive correlation between loneliness and internet addiction.

Yu L, et.al, (2013) conducted a longitudinal study on prevalence and psychosocial correlates of internet addiction among adolescents in Hong Kong. Three waves of data were collected over 3 years (Wave 1: 3,325 students, wave 2: 3,638 students, wave 3: 4,106 students). The tools used were Young's Internet Addiction Test, Chinese Positive Youth Development Scale and Chinese Family Assessment Instrument. At wave 3, 22.5% of the participants met the criterion of internet addiction, which was lower than those observed at wave 1 (26.4%) and wave 2 (26.7%). The test scores reported that male students showed more problematic internet use behavior than female students, good family functioning predicted lower probability of having internet addiction and positive youth development indicates negatively predicted internet addictive behavior over time. The study concluded that strengthening family functioning and promoting positive youth development can prevent internet addiction in adolescents.

Cheung L.M, et.al, (2011) conducted a exploratory cross-sectional study on the effects of insomnia and internet addiction on depression among adolescents in Hong Kong, China. 719 adolescents participated in the study. The tools used were Pittsburgh Sleep Quality Index (PSQI), the Internet Addiction Scale (CIAS) and the 12-item version of General Health Questionnaire (GHQ-12). The test scores reported that 17.2% were internet addicts and 51.7% were insomniac. Both

internet addiction ($p<0.001$) and insomnia ($p<0.001$) demonstrated significant association with depression. There was high co-morbidity between internet addiction and insomnia. Both insomnia and internet addiction emerged as significant explanatory factors, but they exerted differential effects on depression. The study concluded that both insomnia and internet addiction emerged as significant explanatory factors but exerts differential effects on depression.

Chapter-III



Methodology

CHAPTER-III

METHODOLOGY

According to **Polit and Hungler (2012)** research methods are the techniques used by researchers to structure a study and to gather and analyze information relevant to research question.

This chapter deals with description of methodology and the various steps adopted to collect and organize the data for the study. Research methodology involves the systematic procedure by which investigator starts from the initial identification of the problem to its final conclusion. Methodology is a significant part of any study which enables the researcher to project the research undertaken.

The methodology section includes the research approach, research design, research setting, population, sample, criteria for sample selection, sample size and sampling procedure, instrument and scoring procedure, validity, reliability, pilot study, data collection procedure and plan for data analysis.

RESEARCH APPROACH

The selection of research is the basis procedure for the research of enquiry. The research approach helps the researcher to determine what data to collect and how to analyze it. It also suggests possible conclusions to be drawn from the data. In a view of nature the problem was selected and objectives to be accomplished. Descriptive approach was considered as appropriate for the present study.

According to **Polit and Hungler (2012)** Descriptive research is not concerned with the relationship among variables. Its purpose is to observe, describe and document aspects of a situation because the intent of such research is not to explain or to understand the underlying cause of the variables of interest.

The main objective of the descriptive research is to have the accurate portrayal of the characteristics of person, situation or groups and the frequency with which certain phenomena occur.

Therefore, descriptive study method was most appropriate method to assess the psychological problems among adolescents with internet addiction.

Descriptive approach, a subtype of non-experimental quantitative approach was used for the present study

RESEARCH DESIGN

According to **polit and Hungler (2012)** the research design is the overall plan for obtaining answer to the questions being studied and for handling some of the difficulties encountered during the research process.

Descriptive survey design was adopted to conduct the study.

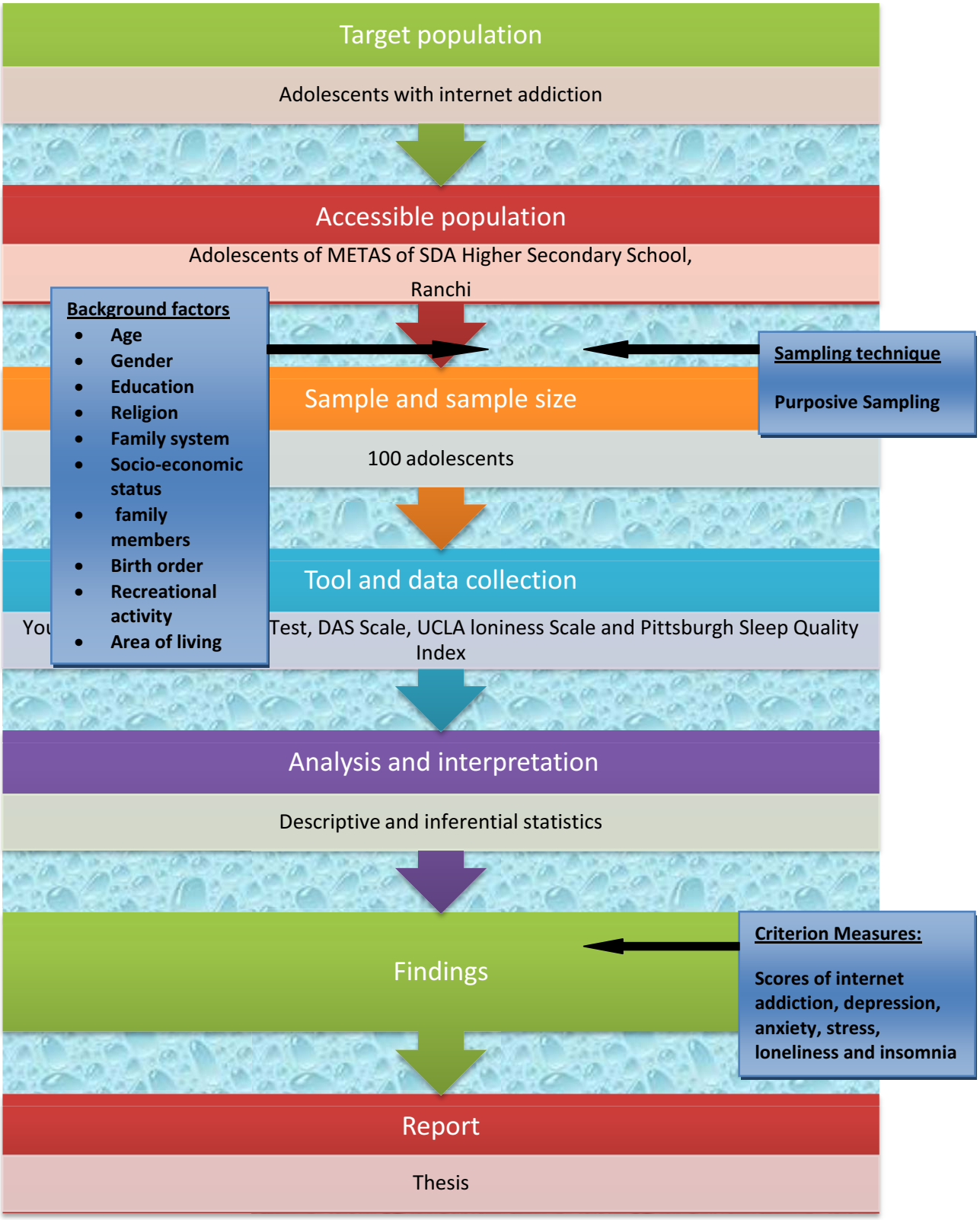


Fig. 1 Shows Research Design

VARIABLES

A variable is anything that varies or can be varied.

Research Variable

These are the qualities, properties, or characteristics which are observed or measured in a natural setting without manipulating and establishing cause-and-effect relationship.

Research variable in the study- psychological problems.

Demographic Variables

The characteristics and attributes of the study subjects are considered as demographic variables, for example age, gender, educational status and so on.

Existing characteristics of the research subjects such as age, gender, education, religion, kind of family system, socio-economic status, number of family members, birth order in the family, type of recreational activity and area of living.

SETTING OF THE STUDY

According to **Polit and Hungler (2012)** setting is more specific places where data collection occurs. The selection of setting was done on the basis of feasibility of conducting the study, availability of subjects and cooperation of the authorities.

The study was conducted in METAS of SDA Higher Secondary School, Bariatu Road, Ranchi.

POPULATION

Polit and Hungler (2012) state that the term "population" refers to the aggregate or totality of all objects, subjects or members that confirm to a set of specifications.

Target population

The entire population in which the researcher are interested and to which they would like to generalize the research findings.

Target population for the present study are adolescents with internet addiction.

Accessible population

The aggregate of cases that conform to designated inclusion or exclusion criteria and that are accessible as subjects of the study.

Accessible population for the present study are adolescents of METAS of SDA Higher Secondary School, Bariatu road, Ranchi.

SAMPLE SIZE

Pilot and Hungler (2012) states that a sample consists of the subset of the population selected to participate in the research study. Sample size is the number of participants in the study. The sample size is determined based on the type of study, variables being studied, the statistical significance required, and availability of samples and feasibility of conducting the study.

Sample size was orbitarly decided to be 100 adolescents those who are studying in METAS of SDA Higher Secondary School, Bariatu Road, Ranchi.

SAMPLING TECHNIQUE

In the present study purposive sampling technique is used. It is one of the non-probability or non random method in which the deliberate selection of sample units that confirm to some predetermined criteria. Purposive sampling is also termed as judgmental or theoretical sampling.

In the selected school, 326 adolescents were in the age group 13-18 years, after completion of internet addiction test, 100 adolescents had internet addiction.

CRITERIA FOR THE SELECTION OF THE SAMPLES

Inclusion Criteria

- Age group between 13 to 18 years.
- Adolescents studying in IX, X, XI and XII standard.
- Adolescents those who are using internet daily.
- Those who are willing to participate in the study.

Exclusion Criteria

- Adolescents who are using internet for educational purpose only.
- Those who are not willing to participate.

DEVELOPMENT OF THE TOOL

The tool is a written device that a researcher assess to collect the data. After careful and detailed review of literature the researcher prepared and developed a structured interview schedule, Young's Internet Addiction Test, Depression anxiety Stress Scale, UCLA Loneliness scale and Modified PSQI Scale as a tool for the present study. Content validity has been done by six experts and modification was done based on suggestions. Reliability of the tool was tested prior to pilot study. The tool comprised of five sections namely section-I demographic variables, section-II Internet Addiction Test, section-III DAS Scale, section-IV UCLA Loneliness Scale and section-V modified PSQI Scale.

DESCRIPTION OF THE TOOL

Description of the tools refers to the explanation of the content of the tool. The researcher lists the number of items and the scoring for each item in the tool. The tool used for the present study has structured questionnaire to assess the selected psychological problems among adolescents with internet addiction. The tool consists of five parts.

Part-I: Description of Demographic Variables

It comprised of 10 items such as age, gender, education, religion, kind of family system, socio-economic status, number of family members, birth order in the family, type of recreational activity and area of living.

Part-II: Internet Addiction Scale

It consists of Young's Internet Addiction Test, it consists of 20 structured questionnaires and ranking were given normal range, mild, moderate and severe internet addiction.

Part-III: Depression Anxiety Stress Scale

DAS Scale (Depression Anxiety Stress Scale) consists of 42 structured questionnaire and ranking were given as mild, moderate, severe and extremely severe.

Part-IV: UCLA Loneliness Scale

The University of California, Los Angeles Loneliness Scale was used to assess the loneliness. It consists of 10 questionnaire, which is consistent with description of level of loneliness.

Part-V: Modified PSQI Scale

The modified Pittsburgh Sleep Quality Index Scale was used to assess the quality of sleep. It consists of 20 questionnaires, which is consistent with description of the sleep quality in an individual.

SCORING PROCEDURE

Part-I

The Internet Addiction Scale to assess the level of internet addiction. It consists of 20 questionnaire. Numerical values 0, 1, 2, 3, 4, 5 are assigned to each questionnaire to indicate the severity of internet addiction. The maximum score is 100 and minimum score is 0.

Scoring Key:

0- Not applicable
1- Rarely
2- Occasionally
3- Frequently
4- Often
5- Always

Score Interpretation:

SCORE	INTERPRETATION
0-30	Normal range
31-49	Mild internet addiction
50-79	Moderate internet addiction
80-100	Severe internet addiction

Part-II

It consists of 42 questionnaire which includes three self report scales designed to measure the negative emotional state of depression, anxiety, stress. Each of the three scales contain 14 items divided into subscales 2-5 items with the similar content respondent use 4 point severity scales to rate the extent.

Score key:

0- Not at all
1- Sometimes
2- Good part of time
3- Most of the time

Score Interpretation:

CLASSIFICATION	**DEPRESSION**	**ANXIETY**	**STRESS**
NORMAL	0-9	0-7	0-14
MILD	10-13	8-9	15-18
MODERATE	14-20	10-14	19-25
SEVERE	21-27	15-19	26-33
EXTREMELY SEVERE	28+	20+	34+

Scores of depression, anxiety and stress are calculated by summing the scores for the relevant items were:

The depression scale items are 3,5,10,13,16,17,21,24,26,31,34,37,38,42

The anxiety scale items are 2,4,7,9,15,19,20,23,25,28,30,36,40,41

The stress scale items are 1,6,8,11,12,14,18,22,27,29,32,33,35,39

Part-III

The UCLA Loneliness Scale to assess the level of loneliness. It consists of 10 questionnaire. Numerical values 1, 2, 3, 4 are assigned to each questionnaire to indicate the level of loneliness.

Score key:

1- Never
2- Rarely
3- Sometimes
4- often

Score Interpretation:

SCORE	**INTERPRETATION**
15-20	Average level of loneliness
21-30	Moderate level of loneliness
31-40	Severe level of loneliness

Part: IV

The Modified Pittsburgh Sleep Quality Scale to assess the quality of sleep and consists of rating score of 4. The ratings are given and weighted to reflect the quality of sleep. Numerical values 1, 2, 3, 4 are assigned to each questionnaire to indicate the sleep quality. The maximum score is 80 and minimum score is 0.

Score key:

1- High quality of sleep
2- Moderate quality of sleep
3- Low quality of sleep
4- Very low quality of sleep

Score Interpretation:

SCORE	INTERPRETATION
0-20	High quality of sleep
21-40	Moderate quality of sleep
41-60	Low quality of sleep
61-80	Very low quality of sleep

TESTING OF THE TOOL

VALIDITY OF THE TOOL

Validity of the tool refers to the degree to which the test or other measuring device is truly measuring what it is indented to measure. The important aspect in assessing an instrument is content validity, criteria validity and construction validity.

The content validity of the data collection tool was ascertained by opinion of experts in the field. It is validated by four psychiatric nursing specialties, one psychiatrists and one psychologist. The modifications were made in the tool for the assessment of internet addiction and psychological problem scales as per the suggestion of the experts and the data collection tool and intervention tool were finalized.

RELIABILITY OF THE TOOL

Polit and Hungler (2012) define reliability as the degree of consistency or accuracy with which an instrument measures the attributes it is designed to measure. Inter rater method was used to establish the reliability among 10 samples. Reliability was computed using Karl Pearson's Correlation Coefficient

method. The reliability was found to be r=0.82 for Internet Addiction Scale, r=0.75 for DAS Scale, r=0.73 for UCLA Loneliness scale and r=0.72 for Modified PSQI Scale. The tool was found to be highly reliable to proceed with the main study.

PILOT STUDY

According to **Polit and Hungler (2012)** pilot study is a small scale version or a trial run done in preparation of major study. Researcher can refine their study by doing it on a small group of people who have similar characteristics of the intended respondents; it helps the researcher to foresee the strength, weakness and problems that may be encountered during the actual study.

The pilot study was conducted in METAS of SDA Higher Secondary School, Bariatu Road, Ranchi with prior permission from the authorities obtained. Informed consent was obtained from 10 samples, who fulfilled the inclusion criteria using purposive sampling method. A brief explanation was given about the purpose of the study to the participants. Data was collected by interviewing and using questionnaire. Privacy and confidentiality was ensured. The study was found to be feasible in terms of availability of samples, cooperation of the institution, time, distance, money and material.

DATA COLLECTION PROCEDURE

After getting the formal permission from the Mr. S D D Naidu, Principal of METAS of SDA Higher Secondary School, Bariatu Road, Ranchi. The purpose and the duration of the study were explained. The sample was selected and their consent was obtained. The study was conducted for a period of one week. The sample was selected by using non probability purposive sampling technique. The questionnaire was administered to adolescents to assess the level of internet addiction and psychological problems. Data was collected from 198 adolescents studying in 9^{th}, 10^{th}, 11^{th} and 12^{th} std. 20 minutes was given to each sample to provide the data. Among 198 adolescents 100 had internet addiction. The collected data was analyzed manually with the help of statistician.

PLAN FOR DATA ANALYSIS

Data analysis is the systematic organization and synthesis of research data and testing of the research hypothesis using the data.

The data collected from the subjects were compiled and analyzed using descriptive and inferential statistics.

1. Frequency and percentage distribution was used to analyze the selected demographic variables of adolescents with internet addiction.
2. Mean and standard deviation was used to assess the selected psychological problems among adolescents with internet addiction.

3. Chi-square was used to find the association between the level of internet addiction and demographic variables among adolescents.
4. Chi-square was used to find the association between the selected psychological problems among adolescents with internet addiction and demographic variables.
5. Correlation Coefficient was used to find out the correlation between internet addiction and selected psychological problems.

ETHICAL CONSIDERATION

The study was approved from the dissertation committee prior to conduct the pilot study and main study. The written consent was obtained from Mr. S D D Naidu, principal of METAS of SDA Higher Secondary School, Bariatu Road, Ranchi. Informed written consent was obtained from the participants after explaining the purpose of the study. No physical or psychological pain was caused to the participants. Participants had the right to walk off from the study at anytime. Confidentiality was maintained throughout the study.

Chapter-IV

Data Analysis & Interpretation

CHAPTER-IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the data collection to assess the selected psychological problems among adolescents with internet addiction at selected school at Ranchi.

Data analysis is the method of organizing data in such a way that the research questions can be answered. Interpretation is the process of making sense of the result and of examining the implication of the finding within a broader context. The analysis was done manually by the investigator and was validated by the bio statistician.

Data was collected in METAS of SDA Higher Secondary School, Ranchi. The data was analyzed manually by the researcher. Data were presented under the following headings.

ORGANIZATION OF DATA

Section-1: Data on frequency and percentage distribution of demographic variables among adolescents with internet addiction.

Section-2: Data on frequency and percentage distribution of adolescents with levels of internet addiction.

Section-3: Data on mean percentage and standard deviation of selected psychological problems among adolescents with internet addiction.

Section-4: Data on association between selected demographic variables and level of internet addiction among adolescents with internet addiction.

Section-5: Data on association between selected demographic variables and their psychological problems among adolescents with internet addiction.

Section-6: Data on correlation between internet addiction and selected psychological problems among adolescents with internet addiction.

SECTION-1: DATA ON FREQUENCY AND PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES AMONG ADOLESCENTS WITH INTERNET ADDICTION.

TABLE-1: FREQUENCY AND PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES AMONG ADOLESCENTS WITH INTERNET ADDICTION

N=100

Demographic Variables	Frequency	Percentage (%)
Age		
a) 13-15 years	41	41
b) 16- 18 years	59	59
Gender		
a) Male	76	76
b) Female	24	24
Education		
a) 9^{th} std	27	27
b) 10^{th} std	34	34
c) 11^{th} std	29	29
d) 12^{th} std	10	10
Religion		
a) Hindu	35	35
b) Christian	40	40
c) Muslim	16	16
d) Others	09	09
Kind of family system		
a) Nuclear family	55	55
b) Joint family	34	34
c) Extended family	03	03
d) Others	08	08

Socio- economic status a) Low income group b) Middle income group c) High income group	 05 92 03	 05 92 03
Number of family members a) 3 b) 4 c) 5 d) 6 and above	 03 30 32 35	 03 30 32 35
Birth order a) 1st child b) 2nd child c) 3rd child d) 4th and above	 41 37 14 08	 41 27 14 08
Type of recreational activity a) Listening to music b) Watching TV c) Reading books d) Other activity	 54 16 12 18	 54 16 12 18
Area of living a) Urban b) Rural c) Semi urban	 60 22 18	 60 22 18

Table-1 Shows the frequency and percentage distribution of demographic variables among adolescents with internet addiction

Regarding **age**, majority 59(59%) of adolescents with internet addiction were in the age group of 16-18 years, and 41(41%) were in the age group 13-15 years.

Regarding **gender**, majority 76(76%) of adolescents with internet addiction were males, and 24(24%) were females.

Regarding **education**, majority 34(34%) of adolescents with internet addiction were in 10^{th} std, 29(29%) were in 11^{th} std, 27(27%) were in 9^{th} std, and 10(10%) were in 12^{th} std.

Regarding **religion**, majority 40(40%) of adolescents with internet addiction were Christian, 35(35%) were hindus, 16(16%) were muslims, and 9(9%) belonged to other religion.

Regarding **kind of family system**, majority 55(55%) of adolescents with internet addiction belonged to nuclear family, 34(34%) belonged to joint family, 8(8%) belonged to other king of family system, and 3(3%) belonged to extended family.

Regarding **socio-economic status**, majority 92(92%) of adolescents with internet addiction were from middle income group family, 5(5%) were from low income group, and 3(3%) were from high income group.

Regarding **numbers of family members**, majority 35(35%) of adolescents with internet addiction had 6 and above family members, 32(32%) had 5 family members, 30(30%) had 4 family members, and 3(3%) had 3 family members.

Regarding **birth order**, majority 41(41%) of adolescents with internet addiction were 1st child, 37(37%) were 2nd child, 14(14%) were 3rd child, and 8(8%) were 4th and above child in the family.

Regarding **type of recreational activity**, majority 54(54%) of adolescents with internet addiction had listening to music as recreational activity, 18(18%) were involved in other activity, 16(16%) were interested in watching TV, and rest 12(12%) read books for their recreation.

Regarding **area of living**, majority 60(60%) of adolescents with internet addiction were living in Urban area, 22(22 %) lives in Rural area, and 18(18%) were living in semi urban area.

It was inferred that majority 59(59%) were in age group of 16-18 years, 76(76%) were males, 34(34%) were studying in 10th std, 40(40%) were Christians, 55(55%) belonged to nuclear family, 92(92%) belonged to middle income group family, 35(35%) had 6 and above family members, 41(41%) were 1st child of the family, 54(54%) liked to listen to music as recreational activity, and 60(60%) were living in urban area.

SECTION-2: DATA ON FREQUENCY AND PERCENTAGE DISTRIBUTION OF ADOLESCENTS WITH LEVEL OF INTERNET ADDICTION.

FIGURE-3: FREQUENCY AND PERCENTAGE DISTRIBUTION OF ADOLESCENTS WITH LEVEL OF INTERNET ADDICTON

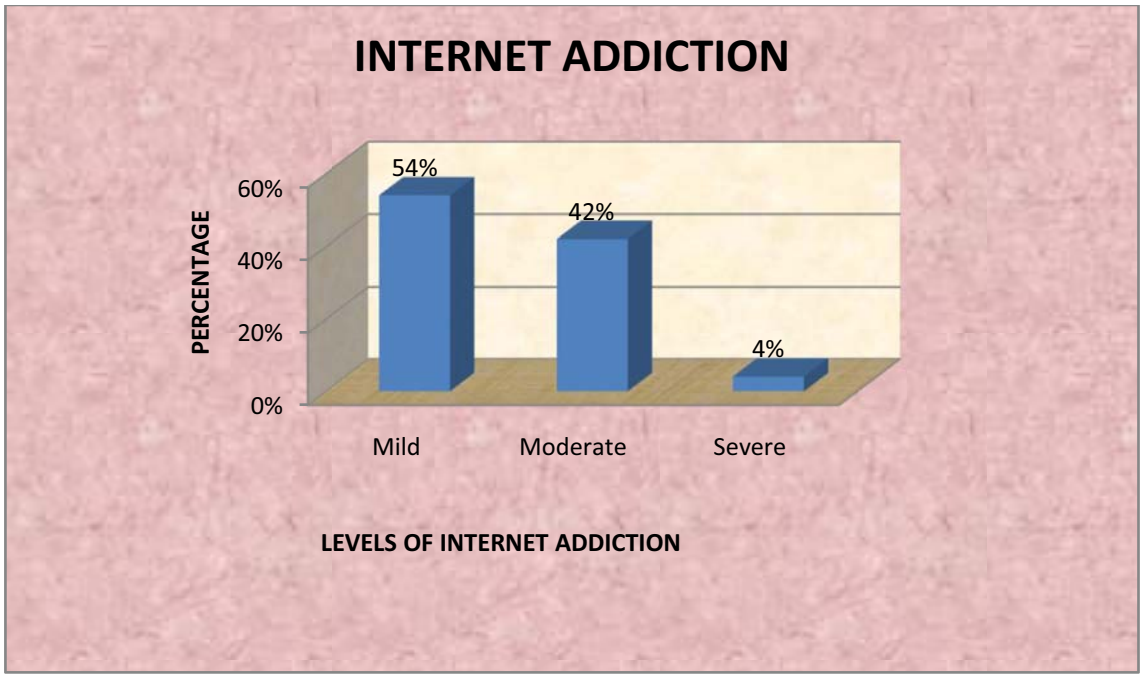


Fig 3: Bar diagram shows frequency and percentage of adolescents with levels of internet addiction

It was inferred that majority of adolescents 54(54%) had mild internet addiction, 42(42%) had moderate internet addiction, and 4(4%) had severe internet addiction.

SECTION-3: DATA ON SELECTED PSYCHOLOGICAL PROBLEMS AMONG ADOLESCENTS WITH INTERNET ADDICTION.

TABLE-2: FREQUENCY AND PERCENTAGE OF DEPRESSION AMONG ADOLESCENTS WITH LEVEL OF INTERNET ADDICTION

N=100

LEVELS OF DEPRESSION	LEVEL OF INTERNET ADDICTION					
	MILD		MODERATE		SEVERE	
	F	%	f	%	f	%
NORMAL	15	15	2	2	0	0
MILD	12	12	8	8	0	0
MODERATE	19	19	22	22	4	4
SEVERE	6	6	6	6	0	0
EXTREMELY SEVERE	2	2	4	4	0	0

Table-2 Shows frequency and percentage of depression among adolescents with level of internet addiction

Regarding frequency and percentage of level of depression among adolescents with the level of internet addiction, in mild level of internet addiction 15(15%) were normal, 12(12%) had mild depression, 19(19%) had moderate depression, 6(6%) had severe depression and 2(2%) had extremely severe depression, in moderate level of internet addiction 2(2%) were normal, 8(8%) had

mild depression, 22(22%) had moderate depression, 6(6%) had severe depression and 4(4%) had extremely severe depression, and in severe level of internet addiction 4(4%) all had moderate depression.

It was inferred that majority 22(22%) had moderate depression in moderate level of internet addiction and least 2(2%) had extremely severe depression in mild level of internet addiction. It was inferred that as the level of internet addiction increases, the severity of depression also increases.

TABLE-3: FREQUENCY AND PERCENTAGE OF ANXIETY AMONG ADOLESCENTS WITH LEVEL OF INTERNET ADDICTION

N=100

LEVELS OF ANXIETY	LEVEL OF INTERNET ADDICTION					
	MILD		MODERATE		SEVERE	
	f	%	f	%	f	%
NORMAL	6	6	1	1	0	0
MILD	6	6	3	3	1	1
MODERATE	16	16	14	14	0	0
SEVERE	17	17	14	14	3	3
EXTREMELY SEVERE	9	9	10	10	0	0

Table-3 Shows frequency and percentage of anxiety among adolescents with level of internet addiction

Regarding frequency and percentage of level of anxiety among adolescents with level of internet addiction, in mild level of internet addiction 6(6%) were normal, 6(6%) had mild anxiety, 16(16%) had moderate anxiety, 17(17%) had severe anxiety and 9(9%) had extremely severe anxiety, in moderate level of internet addiction 1(1%) were normal, 3(3%) had mild anxiety, 14(14%) had moderate anxiety, 14(14%) had severe anxiety and 10(10%) had extremely severe anxiety, and in severe level of internet addiction 1(1%) had mild anxiety and 3(3%) had severe anxiety.

It was inferred that, majority 17(17%) had severe anxiety in mild level of internet addiction and least 1(1%) had mild anxiety in severe level of internet addiction. It was inferred that as the level of internet addiction increases, the severity of anxiety also increases.

TABLE-4: FREQUENCY AND PERCENTAGE OF STRESS AMONG ADOLESCENTS WITH LEVEL OF INTERNET ADDICTION

N=100

LEVELS OF STRESS	LEVEL OF INTERNET ADDICTION					
	MILD		MODERATE		SEVERE	
	f	%	f	%	f	%
NORMAL	2	2	0	0	0	0
MILD	2	2	4	4	0	0
MODERATE	28	28	17	17	3	3
SEVERE	15	15	16	16	1	1
EXTREMELY SEVERE	7	7	5	5	0	0

Table-4 Shows frequency and percentage of stress among adolescents with level of internet addiction

Regarding frequency and percentage of level of stress among adolescents with level of internet addiction, in mild level of internet addiction 2(2%) were normal, 2(2%) had mild stress, 28(28%) had moderate stress, 15(15%) had severe stress and 7(7%) had extremely severe stress, in moderate level of internet addiction 4(4%) had mild stress, 17(17%) had moderate stress, 16(16%) had severe stress and 5(5%) had extremely severe stress, and in severe level of internet addiction 3(3%) had moderate stress and 1(1%) had severe stress.

It was inferred that, majority 17(17%) had moderate stress in moderate level of internet addiction and least 1(1%) had severe anxiety in severe level of internet addiction. It was inferred that as the level of internet addiction increases, the severity of stress also increases.

TABLE-5: FREQUENCY AND PERCENTAGE OF LONELINESS AMONG ADOLESCENTS WITH LEVEL OF INTERNET ADDICTION

N=100

LEVELS OF LONELINESS	LEVEL OF INTERNET ADDICTION					
	MILD		MODERATE		SEVERE	
	F	%	f	%	f	%
AVERAGE	5	5	0	0	0	0
MODERATE	35	35	29	29	4	4
SEVERE	14	14	13	13	0	0

Table-5 Shows frequency and percentage of loneliness among adolescents with level of internet addiction

Regarding frequency and percentage of level of loneliness among adolescents with level of internet addiction, in mild level of internet addiction 5(5%) had average loneliness, 35(35%) had moderate loneliness and 14(14%) had severe loneliness, in moderate level of internet addiction 29(29%) had moderate loneliness and

13(13%) had severe loneliness, and in severe level of internet addiction 4(4%) had moderate loneliness.

It was inferred that, majority 35(35%) had moderate loneliness in mild level of internet addiction and least 4(4%) had moderate loneliness in severe level of internet addiction. It was inferred that as the level of internet addiction increases, the severity of loneliness also increases.

TABLE-6: FREQUENCY AND PERCENTAGE OF QUALITY OF SLEEP AMONG ADOLESCENTS WITH LEVEL OF INTERNET ADDICTION

N=100

QUALITY OF SLEEP	LEVEL OF INTERNET ADDICTION					
	MILD		MODERATE		SEVERE	
	f	%	f	%	f	%
HIGH	0	0	0	0	0	0
MODERATE	19	19	15	15	2	2
LOW	22	22	19	19	2	2
VERY LOW	13	13	8	8	0	0

Table-6 Shows frequency and percentage of quality of sleep among adolescents with level of internet addiction

Regarding frequency and percentage of quality of sleep among adolescents with level of internet addiction, in mild level of internet addiction 19(19%) had moderate quality of sleep, 22(22%) had low quality of sleep and 13(13%) had very low quality of sleep, in moderate level of internet addiction 15(15%) had moderate quality of sleep, 19(19%) had low quality of sleep and 8(8%) had very low quality of sleep, and in severe level of internet addiction 2(2%) had moderate quality of sleep and 2(2%) had low quality of sleep.

It was inferred that, majority 22(22%) had low quality of sleep in mild level internet addiction and least 2(2%) had moderate quality of sleep and low quality of sleep in severe level of internet addiction. It was inferred that as the level of internet addiction increases, the level of low quality of sleep also increases.

FIGURE-4: MEAN PERCENATGE AND STANDARD DEVIATION OF THE SELECTED PSYCHOLOGICAL PROBLEMS

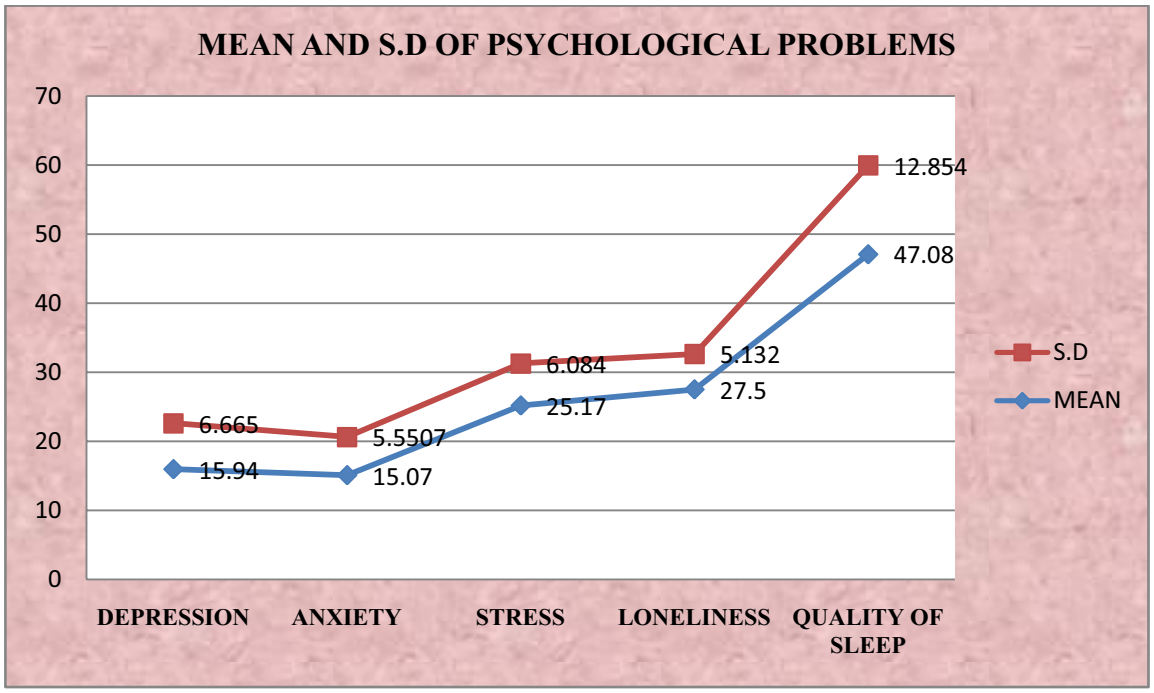


Figure-4 Shows mean percentage and S.D of the selected psychological problems

The obtained mean score of depression, anxiety, stress, loneliness and quality of sleep respectively were 15.94, 15.07, 25.17, 27.50 and 47.08 for adolescents with internet addiction.

The obtained SD score of depression, anxiety, stress, loneliness and quality of sleep respectively were 6.665, 5.507, 6.084, 5.132 and 12.854 for adolescents with internet addiction.

It was inferred that in selected psychological problems among adolescents with internet addiction, majority of them were suffering with low quality of sleep, followed by feeling of loneliness, stress, depression and anxiety respectively.

SECTION-4: DATA ON ASSOCIATION BETWEEN THE SELECTED DEMOGRAPHIC VARIABLES AND THEIR LEVEL OF INTERNET ADDICTION AMONG ADOLESCENTS WITH INTERNET ADDICTION.

TABLE-7: ASSOCIATION BETWEEN THE SELECTED DEMOGRAPHIC VARIABLES AND THEIR LEVEL OF INTERNET ADDICTION AMONG ADOLESCENTS WITH INTERNET ADDICTION

N=100

Demographic Variables	INTERNET ADDICTION						Chi. Square χ^2
	MILD		MODERATE		SEVERE		
	f	%	f	%	f	%	
Age a) 13-15 years b) 16- 18 years	27 27	27 27	13 29	13 29	01 03	01 03	7.18 S (p<0.05)
Gender a) Male b) Female	39 15	39 15	34 08	34 08	03 01	03 01	0.99 NS (p>0.05)

Education							
a) 9th std	18	18	09	09	00	00	10.69 NS (p>0.05)
b) 10th std	17	17	15	15	02	02	
c) 11th std	10	10	17	17	02	02	
d) 12th std	08	08	02	02	00	00	
Religion							
a) Hindu	21	21	11	11	03	03	8.82 NS (p>0.05)
b) Christian	19	19	20	20	01	01	
c) Muslim	10	10	06	06	00	00	
d) Others	04	04	05	05	00	00	
Kind of family system							
a) Nuclear family	31	31	19	19	04	04	13.93 S (p<0.05)
b) Joint family	19	19	15	15	00	00	
c) Extended family	02	02	02	02	00	00	
d) Others	01	01	07	07	00	00	
Socio- economic status							
a) Low income group	03	03	02	02	00	00	4.36 NS (p>0.05)
b) Middle income group	50	50	38	38	04	04	
c) High income group	00	00	03	03	00	00	
Number of family members							
a) 3	00	00	03	03	00	00	9.63 NS (p>0.05)
b) 4	17	17	12	12	01	01	
c) 5	14	14	15	15	03	03	
d) 6 and above	22	22	13	13	00	00	
Birth order							
a) 1st child	21	21	17	17	03	03	2.88 NS (p>0.05)
b) 2nd child	19	19	17	17	01	01	
c) 3rd child	09	09	05	05	00	00	
d) 4th and above	04	04	04	04	00	00	

Type of recreational activity							
a) Listening to music	20	20	30	30	04	04	11.5 NS (p>0.05)
b) Watching TV	10	10	06	06	00	00	
c) Reading books	09	09	03	03	00	00	
d) Other activity	12	12	06	06	00	00	
Area of living							
a) Urban	31	31	26	26	03	03	2.74 NS (p>0.05)
b) Rural	10	10	12	12	00	00	
c) Semi urban	11	11	06	06	01	01	

Table-7: Shows association between the selected demographic variables and their level of internet addiction among adolescents with internet addiction

Regarding **age**, in 13-15 years 27(27%) had mild internet addiction, 13(13%) had moderate internet addiction and 1(1%) had severe internet addiction, in 16-18 years 27(27%) had mild internet addiction, 29(29%) had moderate internet addiction and 3(3%) had severe internet addiction. The obtained chi-square value 7.18 was significant at $p<0.05$.

Regarding **gender**, among males 39(39%) had mild internet addiction, 34(34%) had moderate internet addiction and 3(3%) had severe internet addiction, and among females 15(15%) had mild internet addiction, 8(8%) had moderate internet addiction and 1(1%) had severe internet addiction. The obtained chi-square value 0.99 was not significant at $p>0.05$.

Regarding **education**, in 9th std 18(18%) had mild internet addiction and 9(9%) had moderate internet addiction, in 10th std 17(17%) had mild internet addiction, 15(15%) had moderate internet addiction and 2(2%) had severe internet addiction, in 11th std 10(10%) had mild internet addiction, 17(17%) had moderate internet addiction and 2(2%) had severe internet addiction, and in 12th std 8(8%) had mild internet addiction and 2(2%) had moderate internet addiction. The obtained chi-square value 10.69 was not significant at $p>0.05$.

Regarding **religion**, among Hindus 21(21%) had mild internet addiction, 11(11%) had moderate internet addiction and 3(3%) had severe internet addiction, among Christians 19(19%) had mild internet addiction, 20(20%) had moderate internet addiction and 1(1%) had severe internet addiction, among Muslims 10(10%) had mild internet addiction and 6(6%) had moderate internet addiction, and in other religion 4(%) had mild internet addiction and 5(5%) had moderate internet addiction. The obtained chi-square value 8.82 was not significant at $p>0.05$.

Regarding **kind of family system**, in nuclear family 31(31%) had mild internet addiction, 19(19%) had moderate internet addiction and 4(4%) severe internet addiction, in joint family 19(19%) had mild internet addiction and 15(15%) had moderate internet addiction, in extended family 2(2%) had mild internet addiction and 2(2%) had moderate internet addiction, and in other kind of family system 1(1%) had mild internet addiction and 7(7%) had moderate internet addiction. The obtained chi-square value 13.93 was significant at $p<0.05$.

Regarding **socio-economic status**, in low income group 3(3%) had mild internet addiction, 2(2%) had moderate internet addiction, in middle income group 50(50%) had mild internet addiction, 38(38%) had moderate internet addiction and 4(4%) had severe internet addiction, and in high income group 3(%) had moderate internet addiction. The obtained chi-square value 4.36 was not significant at $p>0.05$.

Regarding **number of family members**, in 3 family members 3(3%) had moderate internet addiction, in 4 family members 17(17%) had mild internet addiction, 12(12%) had moderate internet addiction and 1(1%) had severe internet addiction, in 5 family members 14(14%) had mild internet addiction, 15(15%) had moderate internet addiction and 3(3%) had severe internet addiction, and in 6 and above family members 22(22%) had mild internet addiction and 13(13%) had moderate internet addiction. The obtained chi-square value 9.63 was not significant at $p>0.05$.

Regarding **birth order**, among 1st child 21(21%) had mild internet addiction, 17(17%) had moderate internet addiction and 3(3%) had severe internet addiction, among 2nd child 19(19%) had mild internet addiction, 17(17%) had moderate internet addiction and 1(1%) had severe internet addiction, among 3rd child 9(9%) had mild internet addiction and 5(5%) had moderate internet addiction and among 4th and above child 4(4%) had mild internet addiction and 4(4%) had moderate internet addiction. The obtained chi-square value 2.88 was not significant at $p>0.05$.

Regarding **type of recreational activity**, in listening to music as recreational activity 20(20%) had mild internet addiction, 30(30%) had moderate internet addiction and 4(4%) had severe internet addiction, in watching TV as recreational activity 10(10%) had mild internet addiction and 6(6%) had moderate internet addiction, in reading books as recreational activity 9(9%) had mild internet addiction and 3(3%) had moderate internet addiction, and in other activity 12(12%) had mild internet addiction and 6(6%) had moderate internet addiction. The obtained chi-square value 11.5 was not significant at $p>0.05$.

Regarding **area of living**, in urban area adolescents 31(31%) had mild internet addiction, 26(26%) had moderate internet addiction and 3(3%) had severe internet addiction, in rural area adolescents 10(10%) had mild internet addiction and 12(12%) had moderate internet addiction, and in semi-urban area adolescents 11(11%) had mild internet addiction, 6(6%) had moderate internet addiction and 1(1%) had severe internet addiction. The obtained chi-square 2.74 was not significant at $p>0.05$.

It was inferred that there was no significant association between selected demographic variables such as gender, education, religion, socio-economic status, number of family members, birth order, type of recreational activity, area of living and the level of internet addiction.

It was inferred that there was a significant association between selected demographic variables such as age, kind of family system and the level of internet addiction.

SECTION-5: DATA ON ASSOCIATION BETWEEN THE SELECTED DEMOGRAPHIC VARIABLES AND THEIR PSYCHOLOGICAL PROBLEMS AMONG ADOLESCENTS WITH INTERNET ADDICTION

TABLE-8: ASSOCIATION BETWEEN THE SELECTED DEMOGRAPHIC VARIABLES AND THEIR LEVEL OF DEPRESSION AMONG ADOLECENTS WITH INTERNET ADDICTION

N=100

Demographic Variables	LEVEL OF DEPRESSION										Chi. Square χ^2
	Normal		Mild		Moderate		Severe		Extremely Severe		
	f	%	f	%	f	%	f	%	f	%	
Age											
a) 13-15 years	10	10	10	10	17	17	2	2	2	2	6.689 NS (p>0.05)
b) 16-18 years	7	7	9	9	29	29	10	10	4	4	
Gender											
a) Male	125	125	127	127	388	388	102	102	42	42	3.73 NS (p>0.05)
b) Female											
Education											
a) 9th std	6	6	4	4	14	14	3	3	0	0	18.479 NS (p>0.05)
b) 10th std	66	66	48	48	17	17	1	1	2	2	
c) 11th std	4	4	4	4	13	13	4	4	4	4	
d) 12th std	1	1	3	3	2	2	4	4	0	0	

Religion a) Hindu b) Christian c) Muslim d) others	5 8 3 1	5 8 3 1	8 7 1 3	8 7 1 3	18 17 8 3	18 17 8 3	2 5 3 2	2 5 3 2	3 2 1 0	3 2 1 0	7.352 NS (p>0.05)
Kind of family systems a) Nuclear family b) Joint family c) Extended family d) Others	9 8 0 0	9 8 0 0	11 6 1 1	11 6 1 1	26 12 2 6	26 12 2 6	5 5 1 1	5 5 1 1	3 3 0 0	3 3 0 0	7.914 NS (p>0.05)
Socio-economic status a) Low income group b) Middle income group c) High income group	0 16 1	0 16 1	1 18 0	1 18 0	0 44 2	0 44 2	4 8 0	4 8 0	0 6 0	0 6 0	25.54 S (p<0.05)
Number of family members a) 3 b) 4 c) 5 d) 6 and above	0 2 7 8	0 2 7 8	0 4 5 10	0 4 5 10	3 13 20 10	3 13 20 10	0 8 0 4	0 8 0 4	0 3 0 3	0 3 0 3	25.53 S (p<0.05)

Birth order a) 1st child b) 2nd child c) 3rd child d) 4th and above	7 6 2 2	7 6 2 2	9 6 3 1	9 6 3 1	18 18 7 3	18 18 7 3	6 5 0 1	6 5 0 1	1 2 2 1	1 2 2 1	6.248 NS (p>0.05)
Type of recreational activities a) Listening to music b) Watching TV c) Reading books d) Other activity	7 5 2 3	7 5 2 3	9 5 4 1	9 5 4 1	28 3 5 10	28 3 5 10	8 2 1 1	8 2 1 1	2 2 0 2	2 2 0 2	14.154 NS (p>0.05)
Area of living a) Urban b) Rural c) Semi Urban	12 4 1	12 4 1	11 4 4	11 4 4	24 11 11	24 11 11	8 2 2	8 2 2	6 0 0	6 0 0	7.508 NS (p>0.05)

Table-8 Shows association between the selected demographic variables and their level of depression among adolescents with internet addiction

Regarding **age**, in age 13-15 years 10(10%) were normal, 10(10%) had mild depression, 17(17%) had moderate depression, 2(2%) had severe depression and 2(2%) had extremely severe depression, and in 16-18 years 7(7%) were normal, 9(9%) had mild depression, 29(29%) had moderate depression, 10(10%) had severe depression and 4(4%) had extremely severe depression. The obtained chi-square value 6.689 was not significant at p>0.05.

Regarding **gender**, among males 12(12%) were normal, 12(12%) had mild depression, 38(38%) had moderate depression, 10(10%) had severe depression and 4(4%) had extremely severe depression, and among females 5(5%) were normal, 7(7%) had mild depression, 8(8%) had moderate depression, 2(2%) had severe depression and 2(2%) had extremely severe depression. The obtained chi-square value 3.73 was not significant at $p>0.05$.

Regarding **education**, in 9^{th} std 6(6%) were normal, 4(4%) had mild depression, 14(14%) had moderate depression and 3(3%) had severe depression, in 10^{th} std 6(6%) were normal, 8(8%) had mild depression, 17(17%) had moderate depression, 1(1%) had severe depression and 2(2%) had extremely severe depression, in 11^{th} std 4(4%) were normal, 4(4%) had mild depression, 13(13%) had moderate depression, 4(4%) had severe depression, and 4(4%) had extremely severe depression, and in 12^{th} std 1(1%) were normal, 3(3%) had mild depression, 2(2%) had moderate depression and 4(4%) had severe depression. The obtained chi-square value 18.479 was not significant at $p>0.05$.

Regarding **religion**, among Hindus 5(5%) were normal , 8(8%) had mild depression, 18(18%) had moderate depression, 2(2%) had severe depression and 3(3%) had extremely severe depression, among Christians 8(8%) were normal, 7(7%) had mild depression, 17(17%) had moderate depression, 5(5%) had severe depression and 2(2%) had extremely severe depression, among Muslims 3(3%) were normal, 1(1%) had mild depression, 8(8%) had moderate depression, 3(3%) had severe depression and 1(1%) had extremely severe depression, and among other religion 1(1%) were normal, 3(3%) had mild depression, 3(3%) had

moderate depression and 2(2%) had severe depression. The obtained chi-square value 7.352 was not significant at $p>0.05$.

Regarding **kind of family system**, in nuclear family 9(9%) were normal, 11(11%) had mild depression, 26(26%) had moderate depression, 5(5%) had severe depression and 3(3%) had extremely severe depression, in joint family 8(8%) were normal, 6(6%) had mild depression, 12(12%) had moderate depression, 5(5%) had severe depression and 3(3%) had extremely severe depression, in extended family 1(1%) had mild depression, 2(2%) had moderate depression, 1(1%) had severe depression, and in other type of family system 1(1%) had mild depression, 6(6%) had moderate depression and 1(1%) had severe depression. The obtained chi-square value 7.914 was not significant at $p>0.05$.

Regarding **socio-economic status**, in low income group 1(1%) had mild depression and 4(4%) had severe depression, in middle income group 16(16%) were normal, 18(18%) had mild depression, 44(44%) had moderate depression, 8(8%) had severe depression and 6(6%) had extremely severe depression, and in high income group 1(1%) were normal and 2(2%) had moderate depression. The obtained chi-square value 25.54 was significant at $p<0.05$.

Regarding **number of family members**, in 3 family members 3(3%) had moderate depression, in 4 family members 2(2%) were normal, 4(4%) had mild depression, 13(13%) had moderate depression, 8(8%) had severe depression and 3(3%) had extremely severe depression, in 5 family members 7(7%) were normal, 5(5%) had mild depression, 20(20%) had moderate depression, and in 6 above

family members 8(8%) were normal, 10(10%) had mild depression, 10(10%) had moderate depression, 4(4%) had severe depression and 3(3%) had extremely severe depression. The obtained chi-square value 25.53 was significant at $p<0.05$.

Regarding **birth order**, among 1st child 7(7%) were normal, 9(9%) had mild depression, 18(18%) had moderate depression, 6(6%) had severe depression and 1(1%) had extremely severe depression, among 2nd child 6(6%) were normal, 6(6%) had mild depression, 18(18%) had moderate depression, 5(5%) had severe depression and 2(2%) had extremely severe depression, among 3rd child 2(2%) were normal, 3(3%) had mild depression, 7(7%) had moderate depression and 2(2%) had extremely severe depression, and in 4th and above child 2(2%) were normal, 1(1%) had mild depression, 3(3%) had moderate depression, 1(1%) had severe depression and 1(1%) had extremely severe depression. The obtained chi-square value 6.248 was not significant at $p>0.05$.

Regarding **type of recreational activity**, in recreational activity as listening to music 7(7%) were normal, 9(9%) had mild depression, 28(28%) had moderate depression, 8(8%) had severe depression and 2(2%) had extremely severe depression, in recreation as watching TV 5(5%) were normal, 5(5%) had mild depression, 3(3%) had moderate depression, 2(2%) had severe depression and 2(2%) had extremely severe depression, in recreation as reading books 2(2%) were normal, 4(4%) had mild depression, 5(5%) had moderate depression and 1(1%) had severe depression, and in other activity 3(3%) were normal, 1(1%) had mild depression, 10(10%) had moderate depression, 1(1%) had severe depression and 2(2%) had extremely severe depression. The obtained chi-square value 14.154 was not significant at $p>0.05$.

Regarding **area of living**, in urban area 12(12%) were normal, 11(11%) had mild depression, 24(24%) had moderate depression, 8(8%) had severe depression and 6(6%) had extremely severe depression, in rural area 4(4%) were normal, 4(4%) had mild depression, 11(11%) had moderate depression, 2(2%) had severe depression, and in semi-urban area 1(1%) were normal, 4(4%) had mild depression, 11(11%) had moderate depression and 2(2%) had severe depression. The obtained chi-square 7.508 was not significant at $p>0.05$.

It was inferred that there was no significant association between selected demographic variables such as age, gender, education, religion, kind of family system, birth order, type of recreational activity, area of living and the level of depression.

It was inferred that there was a significant association between selected demographic variables such as socio-economic status, number of family members and the level of depression.

TABLE-9: ASSOCIATION BETWEEN THE SELECTED DEMOGRAPHIC VARIABLES AND THEIR LEVEL OF ANXIETY AMONG ADOLESCENTS WITH INTERNET ADDICTION

N=100

Demographic Variables	LEVEL OF ANXIETY										Chi. Square χ^2
	Normal		Mild		Moderate		Severe		Extremely Severe		
	f	%	f	%	f	%	f	%	f	%	
Age											
a) 13-15 years	4	4	5	5	14	14	10	10	8	8	2.881 NS (p>0.05)
b) 16-18 years	3	3	5	5	17	17	23	23	11	11	
Gender											
a) Male	2	2	9	9	22	22	28	28	15	15	11.645 S (p<0.05)
b) Female	5	5	1	1	9	9	5	5	4	4	
Education											
a) 9th std	3	3	4	4	12	12	4	4	4	4	12.659 NS (p>0.05)
b) 10th std	1	1	3	3	9	9	12	12	9	9	
c) 11th std	2	2	2	2	9	9	11	11	5	5	
d) 12th std	1	1	1	1	1	1	6	6	1	1	
Religion											
a) Hindu	2	2	3	3	10	10	11	11	10	10	24.340 S (p<0.05)
b) Christian	5	5	3	3	12	12	16	16	3	3	
c) Muslim	0	0	1	1	9	9	4	4	2	2	
d) Others	0	0	3	3	0	0	2	2	4	4	

Kind of family systems											
a) Nuclear family	5	5	5	5	15	15	17	17	12	12	11.000 NS (p>0.05)
b) Joint family	2	2	2	2	13	13	12	12	5	5	
c) Extended family	0	0	2	2	1	1	1	1	0	0	
d) Others	0	0	1	1	3	3	3	3	2	2	
Socio-economic status											
a) Low income group	0	0	0	0	1	1	4	4	0	0	6.507 NS (p>0.05)
b) Middle income group	7	7	10	10	29	29	28	28	18	18	
c) High income group	0	0	0	0	1	1	1	1	1	1	
Number of family members											
a) 3	0	0	1	1	1	1	0	0	1	1	7.041 NS (p>0.05)
b) 4	2	2	1	1	10	10	9	9	8	8	
c) 5	2	2	4	4	10	10	12	12	4	4	
d) 6 and above	3	3	4	4	10	10	12	12	6	6	
Birth order											
a) 1st child	2	2	4	4	14	14	14	14	7	7	7.996 NS (p>0.05)
b) 2nd child	3	3	3	3	10	10	12	12	9	9	
c) 3rd child	2	2	1	1	5	5	3	3	3	3	
d) 4th and above	0	0	2	2	2	2	4	4	0	0	

Type of recreational activities											
a) Listening to music	2	2	6	6	20	20	18	18	8	8	
b) Watching TV	3	3	1	1	4	4	3	3	6	6	11.336 NS (p>0.05)
c) Reading books	1	1	2	2	2	2	5	5	2	2	
d) Other activity	1	1	1	1	5	5	7	7	3	3	
Area of living											
a) Urban	5	5	6	6	18	18	21	21	11	11	
b) Rural	1	1	1	1	7	7	8	8	4	4	2.784 NS (p>0.05)
c) Semi Urban	1	1	3	3	6	6	4	4	4	4	

Table-9 Shows association between the selected demographic variables and their level of anxiety among adolescents with internet addiction

Regarding **age**, in age 13-15 years 4(4%) were normal, 5(5%) had mild anxiety, 14(14%) had moderate anxiety, 10(10%) had severe anxiety and 8(8%) had extremely severe anxiety, and in 16-18 years 3(3%) were normal, 5(5%) had mild anxiety, 17(17%) had moderate anxiety, 23(23%) had severe anxiety and 11(11%) had extremely severe anxiety. The obtained chi-square value 2.881 was not significant at p>0.05.

Regarding **gender**, among males 2(2%) were normal, 9(9%) had mild anxiety, 22(22%) had moderate anxiety, 28(28%) had severe anxiety and 15(15%) had extremely severe anxiety, and among females 5(5%) were normal, 1(1%) had

mild anxiety, 9(9%) had moderate anxiety, 5(5%) had severe anxiety and 4(4%) had extremely severe anxiety. The obtained chi-square value 11.645 was significant at p>0.05.

Regarding **education**, in 9th std 3(3%) were normal, 4(4%) had mild anxiety, 12(12%) had moderate anxiety, 4(4%) had severe anxiety and 4(4%) had extremely severe anxiety, in 10th std 1(1%) were normal, 3(3%) had mild anxiety, 9(9%) had moderate anxiety, 12(12%) had severe anxiety and 9(9%) had extremely severe anxiety, in 11th std 2(2%) were normal, 2(2%) had mild anxiety, 9(9%) had moderate anxiety, 11(11%) had severe anxiety, and 5(5%) had extremely severe anxiety, and in 12th std 1(1%) were normal, 1(1%) had mild anxiety, 1(1%) had moderate anxiety, 6(6%) had severe anxiety and 1(1%) had extremely severe anxiety. The obtained chi-square value 12.659 was not significant at p>0.05.

Regarding **religion**, among Hindus 2(2%) were normal, 3(3%) had mild anxiety, 10(10%) had moderate anxiety, 11(11%) had severe anxiety and 10(10%) had extremely severe anxiety, among Christians 5(5%) were normal, 3(3%) had mild anxiety, 12(12%) had moderate anxiety, 16(16%) had severe anxiety and 3(3%) had extremely severe anxiety, among Muslims 1(1%) had mild anxiety, 9(9%) had moderate anxiety, 4(4%) had severe anxiety and 2(2%) had extremely severe anxiety, and among other religion 3(3%) had mild anxiety, 2(2%) had severe anxiety and 4(4%) had extremely severe anxiety. The obtained chi-square value 24.340 was significant at p<0.05.

Regarding **kind of family system**, in nuclear family 5(5%) were normal, 5(5%) had mild anxiety, 15(15%) had moderate anxiety, 17(17%) had severe anxiety and 12(12%) had extremely severe anxiety, in joint family 2(2%) were normal, 2(2%) had mild anxiety, 13(13%) had moderate anxiety, 12(12%) had severe anxiety and 5(5%) had extremely severe anxiety, in extended family 2(2%) had mild anxiety, 1(1%) had moderate anxiety, 1(1%) had severe anxiety, and in other type of family system 1(1%) had mild anxiety, 3(3%) had moderate anxiety, 3(3%) had severe anxiety and 2(2%) had extremely severe anxiety. The obtained chi-square value 11.0 was not significant at $p>0.05$.

Regarding **socio-economic status**, in low income group 1(1%) had moderate anxiety and 4(4%) had severe anxiety, in middle income group 7(7%) were normal, 10(10%) had mild anxiety, 29(29%) had moderate anxiety, 28(28%) had severe anxiety and 18(18%) had extremely severe anxiety, and in high income group 1(1%) had moderate anxiety, 1(1%) had severe anxiety and 1(1%) had extremely severe anxiety. The obtained chi-square value 6.507 was not significant at $p>0.05$.

Regarding **number of family members**, in 3 family members 1(1%) had mild anxiety, 1(1%) had moderate anxiety and 1(1%) had extremely severe anxiety, in 4 family members 2(2%) were normal, 1(1%) had mild anxiety, 10(10%) had moderate anxiety, 9(9%) had severe anxiety and 8(8%) had extremely severe anxiety, in 5 family members 2(2%) were normal, 4(4%) had mild anxiety, 10(10%) had moderate anxiety, 12(12%) had severe anxiety and 4(4%) had extremely severe anxiety, and in 6 above family members 3(3%) were normal, 4(4%) had mild anxiety, 10(10%) had moderate anxiety, 12(12%) had

severe anxiety and 6(6%) had extremely severe anxiety. The obtained chi-square value 7.041 was not significant at $p<0.05$.

Regarding **birth order**, among 1st child 2(2%) were normal, 4(4%) had mild anxiety, 14(14%) had moderate anxiety, 14(14%) had severe anxiety and 7(7%) had extremely severe anxiety, among 2nd child 3(3%) were normal, 3(3%) had mild anxiety, 10(10%) had moderate anxiety, 12(12%) had severe anxiety and 9(9%) had extremely severe anxiety, among 3rd child 2(2%) were normal, 1(1%) had mild anxiety, 5(5%) had moderate anxiety and 3(3%) had severe anxiety and 3(3%) had extremely severe anxiety, and in 4th and above child 2(2%) had mild anxiety, 2(2%) had moderate anxiety and 4(4%) had severe anxiety. The obtained chi-square value 7.996 was not significant at $p>0.05$.

Regarding **type of recreational activity**, in recreational activity as listening to music 2(2%) were normal, 6(6%) had mild anxiety, 20(20%) had moderate anxiety, 18(18%) had severe anxiety and 8(8%) had extremely severe anxiety, in recreation as watching TV 3(3%) were normal, 1(1%) had mild anxiety, 4(4%) had moderate anxiety, 3(3%) had severe anxiety and 6(6%) had extremely severe anxiety, in recreation as reading books 1(1%) were normal, 2(2%) had mild anxiety, 2(2%) had moderate anxiety, 5(5%) had severe anxiety and 2(2%) had extremely severe anxiety, and in other activity 1(1%) were normal, 1(1%) had mild anxiety, 5(5%) had moderate anxiety, 7(7%) had severe anxiety and 3(3%) had extremely severe anxiety. The obtained chi-square value 11.336 was not significant at $p>0.05$.

Regarding **area of living**, in urban area 5(5%) were normal, 6(6%) had mild anxiety, 18(18%) had moderate anxiety, 21(21%) had severe anxiety and 11(11%) had extremely severe anxiety, in rural area 1(1%) were normal, 1(1%) had mild anxiety, 7(7%) had moderate anxiety, 8(8%) had severe anxiety and 4(4%) had extremely severe anxiety, and in semi-urban area 1(1%) were normal, 3(3%) had mild anxiety, 6(6%) had moderate anxiety, 4(4%) had severe anxiety and 4(4%) had extremely severe anxiety. The obtained chi-square 2.784 was not significant at $p>0.05$.

It was inferred that there was no significant association between selected demographic variables such as age, education, kind of family system, socio-economic status, number of family members, birth order, type of recreational activity, area of living and the level of anxiety.

It was inferred that there was a significant association between selected demographic variables such as gender, religion and the level of anxiety.

TABLE-10: ASSOCIATION BETWEEN THE SELECTED DEMOGRAPHIC VARIABLES AND THEIR LEVEL OF STRESS AMONG ADOLESCENTS WITH INTERNET ADDICTION

N=100

Demographic Variables	LEVEL OF STRESS										Chi. Square χ^2
	Normal		Mild		Moderate		Severe		Extremely Severe		
	f	%	F	%	f	%	f	%	f	%	
Age											
a) 13-15 years	1	1	0	0	21	21	15	15	4	4	4.022
b) 16- 18 years	2	2	4	4	27	27	17	17	9	9	NS (p>0.05)
Gender											
a) Male	3	3	3	3	36	36	25	25	9	9	1.382
b) Female	0	0	1	1	12	12	7	7	4	4	NS (p>0.05)
Education											
a) 9th std	0	0	1	1	12	12	10	10	4	4	30.033 S (p<0.05)
b) 10th std	1	1	0	0	20	20	12	12	1	1	
c) 11th std	1	1	0	0	13	13	8	8	7	7	
d) 12th std	1	1	3	3	3	3	2	2	1	1	
Religion											
a) Hindu	3	3	0	0	16	16	14	14	3	3	12.378 NS (p>0.05)
b) Christian	0	0	3	3	21	21	9	9	6	6	
c) Muslim	0	0	1	1	6	6	6	6	3	3	
d) Others	0	0	0	0	5	5	3	3	1	1	

Kind of family system											
a) Nuclear family	1	1	1	1	27	27	17	17	8	8	12.757 NS (p>0.05)
b) Joint family	1	1	2	2	15	15	12	12	4	4	
c) Extended family	1	1	0	0	2	2	0	0	1	1	
d) Others	0	0	1	1	4	4	3	3	0	0	
Socio-economic status											
a) Low income group	0	0	1	1	4	4	0	0	0	0	8.227 NS (p>0.05)
b) Middle income group	3	3	3	3	43	43	31	31	12	12	
c) High income group	0	0	0	0	1	1	1	1	1	1	
Number of family members											
a) 3	0	0	0	0	2	2	1	1	0	0	4.867 NS (p>0.05)
b) 4	2	2	1	1	15	15	8	8	4	4	
c) 5	1	1	2	2	13	13	12	12	4	4	
d) 6 and above	0	0	1	1	18	18	11	11	5	5	
Birth order											
a) 1st child	0	0	1	1	24	24	10	10	6	6	17.900 NS (p>0.05)
b) 2nd child	1	1	1	1	16	16	16	16	3	3	
c) 3rd child	2	2	1	1	3	3	5	5	14	14	
d) 4th and above	0	0	1	1	5	5	1	1	8	8	

Type of recreational activity											
a) Listening to music	1	1	2	2	26	26	17	17	8	8	23.377 S ($p<0.05$)
b) Watching TV	0	0	0	0	5	5	11	11	1	1	
c) Reading books	0	0	2	2	7	7	1	1	2	2	
d) Other activity	2	2	0	0	10	10	3	3	2	2	
Area of living											
a) Urban	1	1	2	2	32	32	16	16	10	10	5.137 NS ($p>0.05$)
b) Rural	1	1	1	1	9	9	8	8	2	2	
c) Semi urban	1	1	1	1	7	7	8	8	1	1	

Table-10 Shows association between the selected demographic variables and their level of stress among adolescents with internet addiction

Regarding **age**, in age 13-15 years 1(1%) were normal, 21(21%) had moderate stress, 15(15%) had severe stress and 4(4%) had extremely severe stress, and in 16-18 years 2(2%) were normal, 4(4%) had mild anxiety, 27(27%) had moderate stress, 17(17%) had severe stress and 9(9%) had extremely severe stress. The obtained chi-square value 4.022 was not significant at $p>0.05$.

Regarding **gender**, among males 3(3%) were normal, 3(3%) had mild stress, 36(36%) had moderate stress, 25(25%) had severe stress and 9(9%) had extremely severe stress, and among females 1(1%) had mild stress, 12(12%) had moderate stress, 7(7%) had severe stress and 4(4%) had extremely severe stress. The obtained chi-square value 1.382 was not significant at $p>0.05$.

Regarding **education**, in 9th std 1(1%) had mild stress, 12(12%) had moderate stress, 10(10%) had severe stress and 4(4%) had extremely severe stress, in 10th std 1(1%) were normal, 20(20%) had moderate stress, 12(12%) had severe stress and 1(1%) had extremely severe stress, in 11th std 1(1%) were normal, 13(13%) had moderate stress, 8(8%) had severe stress, and 7(7%) had extremely severe stress, and in 12th std 1(1%) were normal, 3(3%) had mild stress, 3(3%) had moderate stress, 2(2%) had severe stress and 1(1%) had extremely severe stress. The obtained chi-square value 30.033 was significant at $p<0.05$.

Regarding **religion**, among Hindus 3(3%) were normal, 16(16%) had moderate stress, 14(14%) had severe stress and 3(3%) had extremely severe stress, among Christian 3(3%) had mild stress, 21(21%) had moderate stress, 9(9%) had severe stress and 6(6%) had extremely severe stress, among Muslims 1(1%) had mild stress, 6(6%) had moderate stress, 6(6%) had severe stress and 3(3%) had extremely severe stress, and among other religion 5(5%) had moderate stress, 3(3%) had severe stress and 1(1%) had extremely severe stress. The obtained chi-square value 12.378 was not significant at $p>0.05$.

Regarding **kind of family system**, in nuclear family 1(1%) were normal, 1(1%) had mild stress, 27(27%) had moderate stress, 17(17%) had severe stress and 8(8%) had extremely severe stress, in joint family 1(1%) were normal, 2(2%) had mild stress, 15(15%) had moderate stress, 12(12%) had severe stress and 4(4%) had extremely severe stress, in extended family 1(1%) were normal, 2(2%) had moderate stress and 1(1%) had extremely severe stress, and in other type of family system 1(1%) had mild stress, 4(4%) had moderate stress and 3(3%) had severe stress. The obtained chi-square value 12.757 was not significant at $p>0.05$.

Regarding **socio-economic status**, in low income group 1(1%) had mild stress and 4(4%) had moderate stress, in middle income group 3(3%) were normal, 3(3%) had mild stress, 43(43%) had moderate stress, 31(31%) had severe stress and 12(12%) had extremely severe stress, and in high income group 1(1%) had moderate stress, 1(1%) had severe stress and 1(1%) had extremely severe stress. The obtained chi-square value 8.227 was not significant at $p>0.05$.

Regarding **number of family members**, in 3 family members 2(2%) had moderate stress and 1(1%) had severe stress, in 4 family members 2(2%) were normal, 1(1%) had mild stress, 15(15%) had moderate stress, 8(8%) had severe stress and 4(4%) had extremely severe stress, in 5 family members 1(1%) were normal, 2(2%) had mild stress, 13(13%) had moderate stress, 12(12%) had severe stress and 4(4%) had extremely severe stress, and in 6 above family members 1(1%) had mild stress, 18(18%) had moderate stress, 11(11%) had severe stress and 5(5%) had extremely severe stress. The obtained chi-square value 4.867 was not significant at $p>0.05$.

Regarding **birth order**, among 1st child 1(1%) had mild stress, 24(24%) had moderate stress, 10(10%) had severe stress and 6(6%) had extremely severe stress, among 2nd child 1(1%) were normal, 1(1%) had mild stress, 16(16%) had moderate stress, 16(16%) had severe stress and 3(3%) had extremely severe stress, among 3rd child 2(2%) were normal, 1(1%) had mild stress, 3(3%) had moderate stress, 5(5%) had severe stress and 14(14%) had extremely severe stress and in 4th and above child 1(1%) had mild stress, 5(5%) had moderate stress, 1(1%) had severe stress and 8(8%) had extremely severe stress. The obtained chi-square value 17.900 was not significant at $p>0.05$.

Regarding **type of recreational activity**, in recreational activity as listening to music 1(1%) were normal, 2(2%) had mild stress, 26(26%) had moderate stress, 17(17%) had severe stress and 8(8%) had extremely severe stress, in recreation as watching TV 5(5%) had moderate stress, 11(11%) had severe stress and 1(1%) had extremely severe stress, in recreation as reading books 2(2%) had mild stress, 7(7%) had moderate stress, 1(1%) had severe stress and 2(2%) had extremely severe stress, and in other activity 2(2%) were normal, 10(10%) had moderate stress, 3(3%) had severe stress and 2(2%) had extremely severe stress. The obtained chi-square value 23.377 was significant at $p<0.05$.

Regarding **area of living**, in urban area 1(1%) were normal, 2(2%) had mild stress, 32(32%) had moderate stress, 16(16%) had severe stress and 10(10%) had extremely severe stress, in rural area 1(1%) were normal, 1(1%) had mild stress, 9(9%) had moderate stress, 8(8%) had severe stress and 2(2%) had extremely severe stress, and in semi-urban area 1(1%) were normal, 1(1%) had mild stress, 7(7%) had moderate stress, 8(8%) had severe stress and 1(1%) had extremely severe stress. The obtained chi-square 5.137 was not significant at $p>0.05$.

It was inferred that there was no significant association between selected demographic variables such as age, gender, religion, kind of family system, socio-economic status, number of family members, birth order, area of living and the level of stress.

It was inferred that there was a significant association between selected demographic variables such as education, type of recreational activity and the level of stress.

TABLE: 11: ASSOCIATION BETWEEN THE SELECTED DEMOGRAPHIC VARIABLES AND THEIR LEVEL OF LONELINESS AMONG ADOLESCENTS WITH INTERNET ADDICTION

N=100

Demographic Variables	LEVEL OF LONELINESS						Chi. Square χ^2
	Average		Frequent		Severe		
	F	%	f	%	f	%	
Age							
a) 13-15 years	0	0	26	26	15	15	6.054 S ($p<0.05$)
b) 16- 18 years	5	5	42	42	12	12	
Gender							
a) Male	3	3	50	50	23	23	2.178 NS ($p>0.05$)
b) Female	2	2	18	18	4	4	
Education							
a) 9th std	0	0	12	12	15	15	31.190 S ($p<0.05$)
b) 10th std	0	0	29	29	5	5	
c) 11th std	2	2	21	21	6	6	
d) 12th std	3	3	6	6	1	1	
Religion							
a) Hindu	1	1	25	25	10	10	4.934 NS ($p>0.05$)
b) Christian	4	4	26	26	9	9	
c) Muslim	0	0	10	10	6	6	
d) Others	0	0	7	7	2	2	

Kind of family system							
a) Nuclear family	3	3	38	38	13	13	4.770 NS (p>0.05)
b) Joint family	1	1	23	23	10	10	
c) Extended family	1	1	2	2	1	1	
d) Others	0	0	5	5	3	3	
Socio- economic status							
a) Low income group	1	1	4	4	0	0	4.039 NS (p>0.05)
b) Middle income group	4	4	62	62	26	26	
c) High income group	0	0	2	2	1	1	
Number of family members							
a) 3	0	0	2	2	1	1	3.798 NS (p>0.05)
b) 4	3	3	17	17	10	10	
c) 5	1	1	23	23	8	8	
d) 6 and above	1	1	26	26	8	8	
Birth order							
a) 1st child	2	2	27	27	12	12	4.347 NS (p>0.05)
b) 2nd child	1	1	25	25	11	11	
c) 3rd child	2	2	10	10	2	2	
d) 4th and above	0	0	6	6	2	2	
Type of recreational activity							
a) Listening to music	1	1	39	39	14	14	5.478 NS (p>0.05)
b) Watching TV	2	2	11	11	4	4	
c) Reading books	0	0	8	8	4	4	
d) Other activity	2	2	10	10	5	5	

Area of living a) Urban b) Rural c) Semi urban	2 1 2	2 1 2	43 13 12	43 13 12	16 7 4	16 7 4	2.361 NS (p>0.05)

Table-11 Shows association between the selected demographic variables and their level of loneliness among adolescents with internet addiction

Regarding **age**, in age 13-15 years 26(26%) had frequent loneliness and 15(15%) had severe loneliness, and in 16-18 years 5(5%) had average loneliness, 42(42%) had frequent loneliness and 12(12%) had severe loneliness. The obtained chi-square value 6.054 was significant at $p<0.05$.

Regarding **gender**, among males 3(3%) had average loneliness, 50(50%) had frequent loneliness and 23(23%) had severe loneliness, and among females 2(2%) had average loneliness, 18(18%) had frequent loneliness and 4(4%) had severe loneliness. The obtained chi-square value 2.178 was not significant at $p>0.05$.

Regarding **education**, in 9^{th} std 12(12%) had frequent loneliness and 15(15%) had severe loneliness, in 10^{th} std 29(29%) had frequent loneliness and 5(5%) had severe loneliness, in 11^{th} std 2(2%) had average loneliness, 21(21%) had frequent loneliness and 6(6%) had severe loneliness, and in 12^{th} std 3(3%) had average loneliness, 6(6%) had frequent loneliness and 1(1%) had severe loneliness. The obtained chi-square value 31.190 was significant at $p<0.05$.

Regarding **religion**, among Hindus 1(1%) had average loneliness, 25(25%) had frequent loneliness and 10(10%) had severe loneliness, among Christians 4(4%) had average loneliness, 26(26%) had frequent loneliness and 9(9%) had severe loneliness, among Muslims 10(10%) had frequent loneliness and 6(6%) had severe loneliness, and among other religion 7(7%) had frequent loneliness and 2(2%) had severe loneliness. The obtained chi-square value 4.934 was not significant at $p>0.05$.

Regarding **kind of family system**, in nuclear family 3(3%) had average loneliness, 38(38%) had frequent loneliness and 13(13%) had severe loneliness, in joint family 1(1%) had average loneliness, 23(23%) had frequent loneliness and 10(10%) had severe loneliness, in extended family 1(1%) had average loneliness, 2(2%) had frequent loneliness and 1(1%) had severe loneliness, and in other kind of family system 5(5%) had frequent loneliness and 3(3%) had severe loneliness. The obtained chi-square value 4.770 was not significant at $p>0.05$.

Regarding **socio-economic status**, in low income group 1(1%) had average loneliness, 4(4%) had frequent loneliness, in middle income group 4(4%) had average group, 62(62%) had frequent loneliness and 26(26%) had severe loneliness, and in high income group 2(2%) had frequent loneliness and 1(1%) had severe loneliness. The obtained chi-square value 4.039 was not significant at $p>0.05$.

Regarding **number of family members**, in 3 family members 2(2%) had frequent loneliness and 1(1%) had severe loneliness, in 4 family members 3(3%) had average loneliness, 17(17%) had frequent loneliness and 10(10%) had severe loneliness, in 5 family members 1(1%) had average loneliness, 23(23%) had frequent loneliness and 8(8%) had severe loneliness, and in 6 and above family members 1(1%) had average loneliness, 26(26%) had frequent loneliness and 8(8%) had severe loneliness. The obtained chi-square value 3.798 was not significant at $p>0.05$.

Regarding **birth order**, in 1st child 2(2%) had average loneliness, 27(27%) had frequent loneliness and 12(12%) severe loneliness, in 2nd child 1(1%) had average loneliness, 25(25%) had frequent loneliness and 11(11%) had severe loneliness, in 3rd child 2(2%) had average loneliness, 10(10%) had frequent loneliness and 2(2%) had severe loneliness, and in 4th and above child 6(6%) had frequent loneliness and 2(2%) had severe loneliness. The obtained chi-square value 4.347 was not significant at $p>0.05$.

Regarding **type of recreational activity**, in recreational activity as listening to music 1(1%) had average loneliness, 39(39%) had frequent loneliness and 14(14%) had severe loneliness, in recreation as watching TV 2(2%) had average loneliness, 11(11%) had frequent loneliness and 4(4%) had severe loneliness, in recreation as reading books 8(8%) had frequent loneliness and 4(4%) had severe loneliness, and in other activity 2(2%) had average loneliness, 10(10%) had frequent loneliness, and 5(5%) had severe loneliness. The obtained chi-square value 5.478 was not significant at $p>0.05$.

Regarding **area of living**, in urban area 2(2%) had average loneliness, 43(43%) had frequent loneliness and 16(16%) had severe loneliness, in rural area 1(1%) had average loneliness, 13(13%) had frequent loneliness and 7(7%) had severe loneliness, and in semi-urban area 2(2%) had average loneliness, 12(12%) had frequent loneliness and 4(4%) had severe loneliness. The obtained chi-square 2.261 was not significant at $p>0.05$.

It was inferred that there was no significant association between selected demographic variables such as gender, religion, kind of family system, socio-economic status, number of family members, birth order, type of recreational activity, area of living and the level of loneliness.

It was inferred that there was a significant association between selected demographic variables such as age, education and the level of loneliness.

TABLE-12: ASSOCIATION BETWEEN THE SELECTED DEMOGRAPHIC VARIABLES AND THEIR LEVEL OF QUALITY OF SLEEP AMONG ADOLESCENTS WITH INTERNET ADDICTION

N=100

Demographic Variables	QUALITY OF SLEEP								Chi. Square χ^2
	High		Moderate		Low		Very low		
	f	%	f	%	f	%	f	%	
Age									
a) 13-15 years	0	0	11	11	18	18	12	12	3.007 NS (p>0.05)
b) 16- 18 years	0	0	24	24	25	25	10	10	
Gender									
a) Male	0	0	25	25	33	33	18	18	0.822 NS (p>0.050
b) Female	0	0	10	10	10	10	4	4	
Education									
a) 9th std	0	0	4	4	11	11	12	12	21.698 S (p<0.05)
b) 10th std	0	0	10	10	15	15	9	9	
c) 11th std	0	0	15	15	14	14	0	0	
d) 12th std	0	0	6	6	3	3	1	1	
Religion									
a) Hindu	0	0	12	12	16	16	8	8	7.161 NS (p>0.05)
b) Christian	0	0	18	18	14	14	7	7	
c) Muslim	0	0	5	5	7	7	4	4	
d) Others	0	0	0	0	6	6	3	3	

Kind of family system									
a) Nuclear family	0	0	15	15	27	27	12	12	8.720 NS (p>0.05)
b) Joint family	0	0	13	13	15	15	6	6	
c) Extended family	0	0	2	2	0	0	2	2	
d) Others	0	0	5	5	1	1	2	2	
Socio- economic status									
a) Low income group	0	0	4	4	1	1	0	0	6.302 NS (p>0.05)
b) Middle income group	0	0	31	31	40	40	21	21	
c) High income group	0	0	0	0	2	2	1	1	
Number of family members									
a) 3	0	0	1	1	2	2	0	0	3.347 NS (p>0.05)
b) 4	0	0	8	8	13	13	9	9	
c) 5	0	0	12	12	13	13	7	7	
d) 6 and above	0	0	14	14	15	15	6	6	
Birth order									
a) 1st child	0	0	15	15	19	19	7	7	2.675 NS (p>0.05)
b) 2nd child	0	0	12	12	17	17	8	8	
c) 3rd child	0	0	5	5	5	5	4	4	
d) 4th and above	0	0	3	3	2	2	3	3	
Type of recreational activity									
a) Listening to music	0	0	21	21	20	20	13	13	12.795 S (p<0.05)
b) Watching TV	0	0	4	4	9	9	4	4	
c) Reading books	0	0	2	2	10	10	0	0	
d) Other activity	0	0	8	8	4	4	5	5	

Area of living a) Urban b) Rural c) Semi urban	0 0 0	0 0 0	22 8 5	22 8 5	29 9 5	29 9 5	10 4 8	10 4 8	6.685 NS (p>0.05)

Table-12 Shows association between demographic variables and their level of quality of sleep among adolescents with internet addiction

Regarding **age**, in age 13-15 years 11(11%) had moderate quality of sleep, 18(18%) had low quality of sleep and 12(12%) had very low quality of sleep, and in 16-18 years 24(24%) had moderate quality of sleep, 25(25%) had low quality of sleep and 10(10%) had very low quality of sleep. The obtained chi-square value 3.007 was not significant at p>0.05.

Regarding **gender**, among males 25(25%) had moderate quality of sleep, 33(33%) had low quality of sleep and 18(18%) had very low quality of sleep and among females 10(10%) had moderate quality of sleep, 10(10%) had low quality of sleep and 4(4%) had very low quality of sleep. The obtained chi-square value 0.822 was not significant at p>0.05.

Regarding **education**, in 9^{th} std 4(4%) had moderate quality of sleep, 11(11%) had low quality of sleep and 12(12%) had very low quality of sleep, in 10^{th} std 10(10%) had moderate quality of sleep, 15(15%) had low quality of sleep and 9(9%) had very low quality of sleep, in 11^{th} std 15(15%) had moderate quality of sleep, 14(14%) had low quality of sleep and in 12^{th} std 6(6%) had moderate

quality of sleep, 3(3%) had low quality of sleep and 1(1%) had very low quality of sleep. The obtained chi-square value 21.698 was significant at $p<0.05$.

Regarding **religion**, among Hindus 12(12%) had moderate quality of sleep, 16(16%) had low quality of sleep and 8(8%) had very low quality of sleep, among Christians 18(18%) had moderate quality of sleep, 14(14%) had low quality of sleep and 7(7%) had very low quality of sleep, among Muslims 5(5%) had moderate quality of sleep, 7(7%) had low quality of sleep and 4(4%) had very low quality of sleep, and among other religion 6(6%) had low quality of sleep and 3(3%) had very low quality of sleep. The obtained chi-square value 7.161 was not significant at $p>0.05$.

Regarding **kind of family system**, in nuclear family 15(15%) had moderate quality of sleep, 27(27%) had low quality of sleep and 12(12%) had very low quality of sleep, in joint family 13(13%) had moderate quality of sleep, 15(15%) had low quality of sleep and 6(6%) had very low quality of sleep, in extended family 2(2%) had moderate quality of sleep, 2(2%) very low quality of sleep, and in other kind of family system 5(5%) had moderate quality of sleep, 1(1%) had low quality of sleep and 2(2%) had very low quality of sleep. The obtained chi-square value 8.720 was not significant at $p>0.05$.

Regarding **socio-economic status**, in low income group 4(4%) had moderate quality of sleep, 1(1%) had low quality of sleep, in middle income group 31(31%) had moderate quality of sleep, 40(40%) had low quality of sleep and 21(21%) had very low quality of sleep, and in high income group 2(2%) had low

quality of sleep and 1(1%) had very low quality of sleep. The obtained chi-square value 6.302 was not significant at p>0.05.

Regarding **number of family members**, in 3 family members 1(1%) had moderate quality of sleep, 2(2%) had low quality of sleep, in 4 family members 8(8%) had moderate quality of sleep, 13(13%) had low quality of sleep and 9(9%) had very low quality of sleep, in 5 family members 12(12%) had moderate quality of sleep, 13(13%) had low quality of sleep and 7(7%) had very low quality of sleep, and in 6 and above family members 14(14%) had moderate quality of sleep, 15(15%) had low quality of sleep and 6(6%) had very low quality of sleep. The obtained chi-square value 3.347 was not significant at p>0.05.

Regarding **birth order**, in 1st child 15(15%) had moderate quality of sleep, 19(19%) had low quality of sleep and 7(7%) had very low quality of sleep, in 2nd child 12(12%) had moderate quality of sleep, 17(17%) had low quality of sleep, 8(8%) had very low quality of sleep, in 3rd child 5(5%) had moderate quality of sleep, 5(5%) had low quality of sleep and 4(4%) had very low quality of sleep, and in 4th and above child 3(3%) had moderate quality of sleep, 2(2%) had low quality of sleep and 3(3%) had very low quality of sleep. The obtained chi-square value 2.675 was not significant at p>0.05.

Regarding **type of recreational activity**, in recreational activity as listening to music 21(21%) had moderate quality of sleep, 20(20%) had low quality of sleep and 13(13%) had very low quality of sleep, in recreation as watching TV 4(4%) had moderate quality of sleep, 9(9%) had low quality of sleep and 4(4%) had very

low quality of sleep, in recreation as reading books 2(2%) had moderate quality of sleep, 10(10%) had low quality of sleep, and in other activity, 8(8%) had moderate quality of sleep, 4(4%) had low quality of sleep, and 5(5%) had very low quality of sleep. The obtained chi-square value 12.795 was significant at $p<0.05$.

Regarding **area of living**, in urban area 22(22%) had moderate quality of sleep, 29(29%) had low quality of sleep and 10(10%) had very low quality of sleep, in rural area 8(8%) had moderate quality of sleep, 9(9%) had low quality of sleep and 4(4%) had very low quality of sleep, and in semi-urban area 5(5%) had moderate quality of sleep, 5(5%) had low quality of sleep and 8(8%) had very low quality of sleep. The obtained chi-square 6.685 was not significant at $p>0.05$.

It was inferred that there was no significant association between selected demographic variables such as age, gender, religion, kind of family system, socio-economic status, number of family members, birth order, area of living and the level of quality of sleep.

It was inferred that there was a significant association between selected demographic variables such as education, type of recreational activity and the level of quality of sleep.

SECTION-6: DATA ON CORRELATION BETWEEN INTERNET ADDICTION AND SELECTED PSYCHOLOGICAL PROBLEMS AMONG ADOLESCENTS WITH INTERNET ADDICTION

TABLE-13: CORRELATION BETWEEN THE LEVEL OF INTERNET ADDICTION AND THE LEVEL OF DEPRESSION AMONG ADOLESCENTS WITH INTERNET ADDICTION

N=100

Study Variables	Mean	S.D	r- value
Internet Addiction	50.88	12.258	0.011
Depression	15.94	6.665	

Table-13 Shows the mean, SD and r-value of internet addiction and depression among adolescents with internet addiction

In the aspect of internet addiction mean score was 50.88 and S.D was 12.258 and depression mean score was 15.94 and S.D was 6.665, and the obtained r-value was 0.011. Hence, it was inferred that there was partially positive correlation between the level of internet addiction and level of depression among adolescents with internet addiction.

TABLE-14: CORRELATION BETWEEN THE LEVEL OF INTERNET ADDICTION AND THE LEVEL OF ANXIETY AMONG ADOLESCENTS WITH INTERNET ADDICTION

N=100

Study Variables	Mean	S.D	r-value
Internet Addiction	50.88	12.258	0.247
Anxiety	15.07	5.507	

Table-14 Shows the mean, SD and r-value of internet addiction and anxiety among adolescents with internet addiction

In the aspect of internet addiction mean score was 50.88 and S.D was12.258 and anxiety mean score was 15.07 and S.D was5.507, and the obtained r-value was 0.247. Hence, it was inferred that there was partially positive correlation between the level of internet addiction and level of anxiety among adolescents with internet addiction.

TABLE-15: CORRELATION BETWEEN THE LEVEL OF INTERNET ADDICTION AND THE LEVEL OF STRESS AMONG ADOLESCENTS WITH INTERNET ADDICTION

N=100

Study Variables	Mean	SD	r-value
Internet Addiction	50.88	12.258	0.661
Stress	25.17	6.084	

Table-15 Shows the mean, SD and r-value of internet addiction and stress among adolescents with internet addiction

In the aspect of internet addiction mean score was 50.88 and S.D=12.258 and stress mean score was 25.17 and S.D was 6.084, and the obtained r-value was 0.661. Hence, it was inferred that there was partially positive correlation between the level of internet addiction and level of stress among adolescents with internet addiction.

TABLE-16: CORRELATION BETWEEN THE LEVEL OF INTERNET ADDICTION AND THE LEVEL OF LONELINESS AMONG ADOLESCENTS WITH INTERNET ADDICTION

N=100

Study Variables	Mean	SD	r-value
Internet Addiction	50.88	12.258	0.376
Loneliness	27.50	5.132	

Table-16 Shows the mean, SD and r-value of internet addiction and loneliness among adolescents with internet addiction

In the aspect of internet addiction mean score was 50.88 and S.D was12.258 and loneliness mean score was 27.50 and S.D was 5.132, and the obtained r-value was 0.376. Hence, it was inferred that there was partially positive correlation between the level of internet addiction and level of loneliness among adolescents with internet addiction.

TABLE-17: CORRELATION BETWEEN THE LEVEL OF INTERNET ADDICTION AND THE LEVEL OF QUALITY OF SLEEP AMONG ADOLESCENTS WITH INTERNET ADDICTION

N=100

Study Variables	Mean	SD	r-value
Internet Addiction	50.88	12.258	0.845
Quality of Sleep	47.08	12.859	

Table-17 Shows the mean, SD and r-value of internet addiction and quality of sleep among adolescents with internet addiction

In the aspect of internet addiction mean score was 50.88 and S.D was12.258 and quality of sleep mean score was 47.08 and S.D was12.859, and the obtained r-value was 0.845. Hence, it was inferred that there was partially positive correlation between level of internet addiction and level of quality of sleep.

Chapter-V

Summary, findings, Discussion, Implication, Recommendations & Conclusion

CHAPTER-V

SUMMARY, FINDINGS, DISCUSSION, IMPLICATIONS, LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

The essence of any project lies in reporting the findings. This chapter gives a brief account of the present study including conclusion drawn from the findings, recommendations, limitation of the study, suggestions for the further studies and nursing implications.

SUMMARY

The ultimate aim of the study was to assess the psychological problems among adolescents with internet addiction in selected school, Ranchi.

The objectives of the study were

11. To assess the level of internet addiction among adolescents with internet addiction in selected school.
12. To assess the selected psychological problems among adolescents with internet addiction.

13. To find out the association between internet addiction and their selected demographic variables among adolescents.
14. To find out the association between selected psychological problems and their selected demographic variables among adolescents with internet addiction.
15. To find out the correlation between the internet addiction and selected psychological problems among adolescents with internet addiction.

The study attempted to examine the following hypothesis

H_1: There is a significant relationship between the level of internet addiction and selected psychological problems among adolescents with internet addiction.

H_2: There is a significant association between the level of internet addiction and selected demographic variables among adolescents with internet addiction.

Review of literature enabled the investigator to develop the conceptual framework by own, based on the concepts and ideas. Literature review was done for the present study and presented in the following headings:

- Studies related to prevalence and factors of internet addiction among adolescents.
- Studies related to psychological problems among adolescents with internet addiction.

The conceptual framework adopted for the present study was developed based on. The study was a descriptive survey design.

The tool developed and used for data collection was a structured questionnaire. The content validity of the tool was established by 5 experts. The reliability of the tool was established by inter-rater reliability method. The reliability co-efficient was high r=0.82 for Internet Addiction Scale, r=0.75 for DAS Scale, r=0.73 for UCLA Loneliness Scale and r=0.72 for Modified PSQI Scale. The pilot study was conducted at METAS of SDA Higher Secondary School, Ranchi, among 10 adolescents who fulfilled the sample selection criteria, which were other than study sample. The study was found to be feasible.

The main study was conducted in METAS of SDA Higher Secondary School, Ranchi. Prior permission from the authorities was sought and obtained, informed verbal consent was taken from the adolescents after explaining the purpose of the study. The samples were selected by purposive sampling technique based on the sample selection criteria. A total of 100 adolescents were recruited in the study. Gathered data was analyzed based on the objectives using descriptive and inferential statistics manually by the researcher with the help of statistician. The level of probability at $p<0.05$ was considered to be significant.

FINDINGS

The major findings of the study were presented based on the tables of the study.

Finding-1: Frequency and percentage distribution of demographic variables among adolescents with internet addiction

- It was inferred that majority 59(59%) were in age group of 16-18 years, 76(76%) were males, 34(34%) were studying in 10^{th} std, 40(40%) were Christians, 55(55%) belonged to nuclear family, 92(92%) belonged to middle class family, 35(35%) had 6 and above family members, 41(41%) were 1^{st} child of the family, 54(54%) liked to listen to music as recreational activity, and 60(60%) were living in urban area.

Findings-2: Frequency and percentage distribution of adolescents with levels of internet addiction

- It was inferred that majority of adolescents 54(54%) had mild internet addiction, 42(42%) had moderate internet addiction, and 4(4%) had severe internet addiction.

Findings-3: frequency, percentage, mean and S.D of the selected psychological problems among adolescents with internet addiction

- It was inferred that, majority 22(22%) had moderate depression in moderate level of internet addiction and least 2(2%) had extremely severe depression in mild level of internet addiction.
- It was inferred that, majority 17(17%) had severe anxiety in mild level of internet addiction and least 1(1%) had mild anxiety in severe level of internet addiction.
- It was inferred that, majority 17(17%) had moderate stress in moderate level of internet addiction and least 1(1%) had severe anxiety in severe level of internet addiction.
- It was inferred that, majority 35(35%) had moderate loneliness in mild level of internet addiction and least 4(4%) had moderate loneliness in severe level of internet addiction.
- It was inferred that, majority 22(22%) had low quality of sleep in mild level internet addiction and least 2(2%) had moderate quality of sleep and low quality of sleep in severe level of internet addiction.
- The obtained mean score of depression, anxiety, stress, loneliness and quality of sleep respectively were 15.94, 15.07, 25.17, 27.50 and 47.08 for adolescents with internet addiction.
- The obtained S.D score of depression, anxiety, stress, loneliness and quality of sleep respectively were 6.665, 5.507, 6.084, 5.132 and 12.854 for adolescents with internet addiction.
- It was inferred that majority of adolescents had low quality of sleep, followed by feeling of loneliness and least had anxiety.

Findings-4: Data on association between the selected demographic variables and their level of internet addiction

- There was no significant association between selected demographic data such as gender (χ^2=0.99), education (χ^2=10.69), religion (χ^2=8.82), socio-economic status (χ^2=4.36), number of family members (χ^2=9.63), birth order (χ^2=2.88), type of recreational activity (χ^2=11.5), area of living (χ^2=2.74) and the level of internet addiction at $p>0.05$.
- There was a significant association between selected demographic data such as age (χ^2=7.18), kind of family system (χ^2=13.93) and the level of internet addiction at $p<0.05$.

Findings-5: Data on association between the selected demographic variables and their psychological problems among adolescents with internet addiction

- There was no significant association between selected demographic data such as age (χ^2=6.689), gender (χ^2=3.73), education (χ^2=18.479), religion (χ^2=7.352), kind of family system (χ^2=7.914), birth order (χ^2=6.248), type of recreational activity (χ^2=14.154), area of living (χ^2=7.508) and the level of depression at $p>0.05$.
- There was a significant association between selected demographic data such as socio-economic status (χ^2=25.54), number of family members (χ^2=25.53) and the level of depression at $p<0.05$.

- There was no significant association between selected demographic data such as age (χ^2=2.881), education (χ^2=12.659), kind of family system (χ^2=11.0), socio-economic status (χ^2=6.507), number of family members (χ^2=7.041), birth order (χ^2=7.996), type of recreational activity (χ^2=11.336), area of living (χ^2=2.784) and the level of anxiety at $p>0.05$.
- There was a significant association between selected demographic data such as gender (χ^2=11.645), religion (χ^2=24.340) and the level of anxiety at $p<0.05$.
- There was no significant association between selected demographic data such as age (χ^2=4.022), gender (χ^2=1.382), religion (χ^2=12.378), kind of family system (χ^2=12.757), socio-economic status (χ^2=8.227), number of family members (χ^2=4.867), birth order (χ^2=17.90), area of living (χ^2=5.137) and the level of stress $p>0.05$.
- There was a significant association between selected demographic data such as education (χ^2=30.033), type of recreational activity (χ^2=23.377) and the level of stress at $p<0.05$.
- There was no significant association between selected demographic data such as gender (χ^2=2.178), religion (χ^2=4.934), kind of family system (χ^2=4.770), socio-economic status (χ^2= 4.039), number of family members (χ^2= 3.798), birth order (χ^2= 4.347), type of recreational activity (χ^2=5.478), area of living (χ^2=2.361) and the level of loneliness at $p>0.05$.
- There was a significant association between selected demographic data such as age (χ^2=3.007), education (χ^2=21.698) and the level of loneliness at $p<0.05$.
- There was no significant association between selected demographic data such as age (χ^2=3.007), gender (χ^2=0.822), religion (χ^2=7.161), kind of family

system (χ^2=8.720), socio-economic status (χ^2=6.302), number of family members (χ^2=3.347), birth order (χ^2=2.675), area of living (χ^2=6.685) and the level of quality of sleep at p>0.05.

- There was a significant association between selected demographic data such as education (χ^2=21.698), type of recreational activity (χ^2=12.795) and the level of quality of sleep at p<0.05.

Findings-6: Data on correlation between internet addiction and selected psychological problems

- The obtained internet addiction mean score was 50.88 and S.D was12.258 and depression mean score was 15.94 and S.D was 6.665, and the obtained r-value was 0.001.
- The obtained internet addiction mean score was 50.88 and S.D was12.258 and anxiety mean score was 15.07 and S.D was 5.507, and the obtained r-value was 0.247.
- The obtained internet addiction mean score was 50.88 and S.D was12.258 and stress mean score was 25.17 and S.D was 6.084, and the obtained r-value was 0.661.
- The obtained internet addiction mean score was 50.88 and S.D was 12.258 and loneliness mean score was 27.50 and S.D was 5.132, and the obtained r-value was 0.376.
- The obtained internet addiction mean score was 50.88 and S.D was12.258 and quality of sleep mean score was 47.08 and S.D was12.859, and the obtained r-value was 0.845.

- It was inferred that in selected psychological problems with internet addiction, majority of them were suffering with low quality of sleep, followed by feeling of loneliness, stress, depression and anxiety respectively.

DISCUSSION

The results of the study were discussed according to the objectives of the study.

Objective 1 To assess the level of internet addiction among adolescents with internet addiction in selected school.

- It was inferred that majority of adolescents 54(54%) had mild internet addiction, 42(42%) had moderate internet addiction, and 4(4%) had severe internet addiction.

Poli R, et.al, (2012) conducted a study on prevalence of internet addiction disorder among high school students attending secondary institutions in the district of Cremona and to assess any difference concerning variables such as gender, age, place of residence and kind of school attended in Italy. A total of 2533 students from different schools participated in the study. The tools used were social and demographic questionnaire and Internet Addiction Test (IAT). The internet addiction test score reported 94.19% were normal users of internet, 5.01%

moderately addicted and 0.79% seriously addicted. Significant differences in gender and in kinds of school were found. No statistical differences were revealed in age and urban or rural conditions. The study concluded that there was high prevalence of internet addiction disorder.

Sasmaz T, et.al, (2012) conducted a cross-sectional study on prevalence and risk factors of internet addiction among high school students in Mersin Province. A total of 1156 high school students participated in the study, among whom 609 (52.7%) were male with mean age of 16.1± 0.9 years. The test scores reported that 79% of students had computer at home and 64.0% had home internet connection. 175 (15.1%) students were internet addicts. The addiction rate was 9.3% in girls and 20.4% in boys ($p<0.001$). The study concluded that prevalence of internet addiction was high among high school students.

Objective 2 To assess the selected psychological problems among adolescents with internet addiction.

- The obtained mean score of depression, anxiety, stress, loneliness and quality of sleep respectively were 15.94, 15.07, 25.17, 27.50 and 47.08 for adolescents with internet addiction.
- The obtained S.D score of depression, anxiety, stress, loneliness and quality of sleep respectively were 6.665, 5.507, 6.084, 5.132 and 12.854 for adolescents with internet addiction.
- It was inferred that in selected psychological problems among adolescents with internet addiction, majority of them were suffering with low quality of

sleep, followed by feeling of loneliness, stress, depression and anxiety respectively.

Goel D, et.al, (2013) conducted a cross-sectional study on prevalence of internet addiction and associated existing psychopathology among adolescents in Mumbai, India. A total of 987 students, 681 female and 306 males of various faculties across the city of Mumbai participated in the study. The tools used were specially constructed semi-structured proforma and the Internet Addiction Test (IAT; Young, 1998). The test score reported that 74.5% were moderate users and 0.7% were internet addicts. Those with excessive internet use had high scores on anxiety and depression. The study concluded that students experienced anxiety and depression due to excessive internet use.

Objective 3 To find out the association between internet addiction and selected demographic variables among adolescents.

- There was no significant association between selected demographic data such as gender (χ^2=0.99), education (χ^2=10.69), religion (χ^2=8.82), socio-economic status (χ^2=4.36), number of family members (χ^2=9.63), birth order (χ^2=2.88), type of recreational activity (χ^2=11.5), area of living (χ^2=2.74) and the level of internet addiction at $p>0.05$.
- There was a significant association between selected demographic data such as age (χ^2=7.18), kind of family system (χ^2=13.93) and the level of internet addiction at $p<0.05$.

Ak S, et al, (2013) conducted a descriptive study with an aim to investigate the internet use, with a focus on the risk of Internet Addiction among adolescents in Turkey. A total of 4,311 adolescents attending public high schools in grades 9-12. Aged 15-19 years (54% female and 46% male) participated in the study. The tool used were socio-demographic information and Young's Internet Addiction Test. The findings showed that, regardless of gender, Facebook ranked highest in the classification of students' purpose of internet use; it was found that females mainly used internet for communication, whereas males were more interested in playing online games and reading newspapers and magazines. The study concluded that the significant predictors of internet addiction were the presence of internet access at home, gender and family income level.

Objective 4 To find out the association between selected psychological problems and selected demographic variables among adolescents with internet addiction.

- There was no significant association between selected demographic data such as age (χ^2=6.689), gender (χ^2=3.73), education (χ^2=18.479), religion (χ^2=7.352), kind of family system (χ^2=7.914), birth order (χ^2=6.248), type of recreational activity (χ^2=14.154), area of living (χ^2=7.508) and the level of depression at $p>0.05$. There was a significant association between selected demographic data such as socio-economic status (χ^2=25.54), number of family members (χ^2=25.53) and the level of depression at $p<0.05$.
- There was no significant association between selected demographic data such as age (χ^2=2.881), education (χ^2=12.659), kind of family system (χ^2=11.0), socio-economic status (χ^2=6.507), number of family members (χ^2=7.041),

birth order (χ^2=7.996), type of recreational activity (χ^2=11.336), area of living (χ^2=2.784) and the level of anxiety at p>0.05. There was a significant association between selected demographic data such as gender (χ^2=11.645), religion (χ^2=24.340) and the level of anxiety at p<0.05.

- There was no significant association between selected demographic data such as age (χ^2=4.022), gender (χ^2=1.382), religion (χ^2=12.378), kind of family system (χ^2=12.757), socio-economic status (χ^2=8.227), number of family members (χ^2=4.867), birth order (χ^2=17.90), area of living (χ^2=5.137) and the level of stress p>0.05. There was a significant association between selected demographic data such as education (χ^2=30.033), type of recreational activity (χ^2=23.377) and the level of stress at p<0.05.
- There was no significant association between selected demographic data such as gender (χ^2=2.178), religion (χ^2=4.934), kind of family system (χ^2=4.770), socio-economic status (χ^2= 4.039), number of family members (χ^2= 3.798), birth order (χ^2= 4.347), type of recreational activity (χ^2=5.478), area of living (χ^2=2.361) and the level of loneliness at p>0.05. There was a significant association between selected demographic data such as age (χ^2=3.007), education (χ^2=21.698) and the level of loneliness at p<0.05.
- There was no significant association between selected demographic data such as age (χ^2=3.007), gender (χ^2=0.822), religion (χ^2=7.161), kind of family system (χ^2=8.720), socio-economic status (χ^2=6.302), number of family members (χ^2=3.347), birth order (χ^2=2.675), area of living (χ^2=6.685) and the level of quality of sleep at p>0.05. There was a significant association between selected demographic data such as education (χ^2=21.698), type of recreational activity (χ^2=12.795) and the level of quality of sleep at p<0.05.

Yen C.F, et.al, (2014) conducted a descriptive study on association of severity of internet addiction symptoms with various dimensions of anxiety, depression symptoms and self-esteem among adolescents with Attention-deficit/hyperactivity disorder (ADHD) among adolescents in Taiwan. 287 adolescents aged between 11 and 18 years participated in the study. The tools used were the Chen Internet Addiction Scale, Multidimensional Anxiety Scale for children (MASC-T), the center for Epidemiological Studies Depression Scale (CES-D) and the Rosenberg Self-esteem Scale (RSES). The anxiety test score reported higher physical symptoms and lower harm avoidance. Depression test score reported higher somatic discomfort and self-esteem test score reported lower self-esteem. The study concluded that anxiety, depression and self-esteem were significantly associated with more severe internet addiction symptoms.

Objective 5 To find out the correlation between the internet addiction and selected psychological problems among adolescents with internet addiction.

- There was a partially positive correlation (r=0.011) between the level of internet addiction and level of depression among adolescents with internet addiction.
- There was a partially positive correlation (r=0.247) between the level of internet addiction and level of anxiety among adolescents with internet addiction.
- There was a partially positive correlation (r=0.661) between the level of internet addiction and level of stress among adolescents with internet addiction.

- There was a partially positive correlation (r=0.376) between the level of internet addiction and level of loneliness among adolescents with internet addiction.
- There was a partially positive correlation (r=0.845) between level of internet addiction and level of quality of sleep.

Yadav P, et.al, (2013) conducted a preliminary study on internet addiction and its correlation with socio-educational characteristics, internet use patterns and psychological variables namely depression, anxiety and stress among Indian school students of class 11^{th} and 12^{th} in Ahmedabad, India. 621 students of six English medium schools of Ahmedabad participated in the study, of which 552 (88.9%) who completed forms were analyzed. The tools used were Young's Internet Addiction Test, 21 items Depression Anxiety and stress Scale and psychological variables. The test scores reported 65 (11.8%) students had internet addiction and there was strong positive correlation between internet addiction and depression, anxiety and stress. The study concluded that internet addiction was positively correlated to depression, anxiety and stress.

Koyuncu, et.al, (2012) conducted a cross-sectional study on assessment of internet addiction and loneliness among secondary and high school students in Sivrihisar, Anatolia, Turkey. 1157 students, 636 males and 521 females, aged 11 to 19 years participated in the study. The tools used were Young's Internet Addiction Scale and University of California, Los Angeles (UCLA) Loneliness Scale. The internet addiction test score reported that 7.9% were addicted to internet. Obesity (odds ratio: 9.57), "type A" personality (odds ratio: 1.83), first time usage of internet before age 12 (odds ratio: 2.18), using internet everyday

(odds ratio: 2.47) and use internet more than 2 hours a day (odds ratio: 4.96) were risk factors of internet addiction ($p<0.05$). A positive correlation was found between internet addiction and loneliness ($p<0.05$). The study concluded that there was positive correlation between loneliness and internet addiction.

IMPLICATION

The study has the following implications in nursing for the nursing services, nursing administration, nursing education and nursing research.

Implication in Nursing Service

- Nurses should give attention to reduce psychological problems among adolescents with internet addiction.
- Nurses should establish counseling centre at schools, colleges and community level.
- It is the responsibility of the nursing personnel to educate about the psychological problems due to internet addiction and its coping.

Implication in Nursing Administration

- Nurse Administrator has to plan and organize training program for the student nurses and the nurses regarding internet addiction and its psychological problems.
- Nurse Administrators has to organize educational programs in the schools, colleges and community setting regarding psychological problems due to internet addiction.

Implication in Nursing Education

- As Internet Addiction is a global problem, Internet hazards can be included in nursing curriculum.
- Training of school health nurses can be done also regarding mental health of school students.

Implication in Nursing Research

- The study creates the awareness further among the adolescents.
- Further investigation can use this study as a reference material.

LIMITATIONS

- Pilot study was done only for 10 adolescents.
- Study was only for the adolescents 13-18 years.
- Study was done in only one institution.
- Sample size was small, only 100 adolescents, as internet addiction is a global problem.
- Study was a descriptive study.

PERSONAL EXPERIENCE

- The investigator has gained lot of new information and experience in many ways starting from the searching of research problem till the submission of the thesis.
- The investigator did not have many problems in selecting the samples.
- Apart from the struggle and tension, doing research was quite interesting and helpful.
- Investigator got limited literature review.

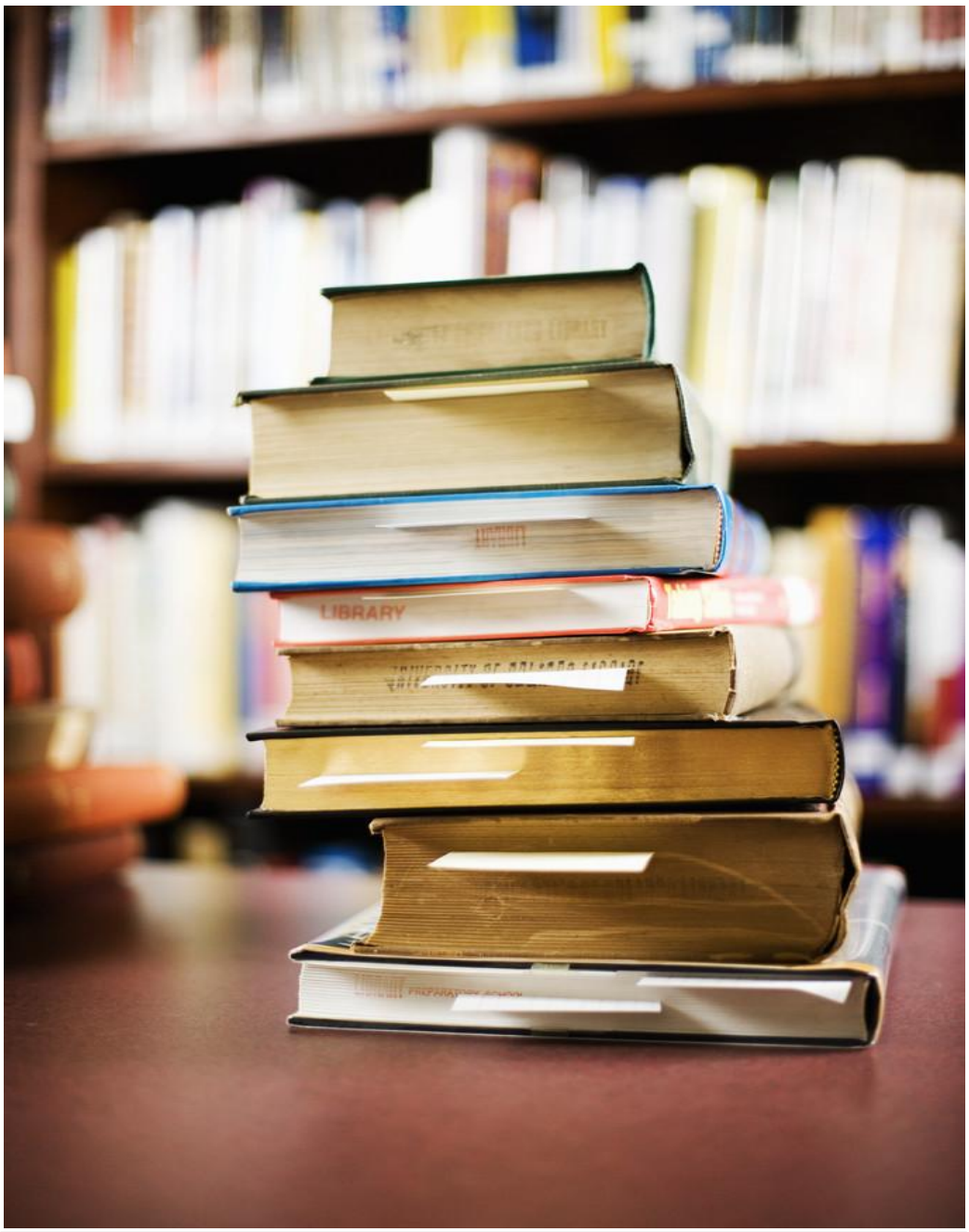
RECOMMENDATIONS

- A similar study can be conducted in larger group of adolescents.
- A longer period of intervention can be studied for reliability and effectiveness.

- Interventions such as awareness program, various psychological therapies, counseling sessions, etc can be given to reduce psychological problems such as depression, anxiety, stress, loneliness and enhance coping.
- The similar study can be undertaken using the counseling as a treatment and counseling of psychological problem faced and level of depression, anxiety, stress, loneliness and quality of sleep can be assessed.

CONCLUSION

The findings of the study showed that most of the adolescents with internet addiction had psychological problem, majority of them were suffering with low quality of sleep, followed by feeling of loneliness, stress, depression and anxiety respectively. The researcher concluded that the psychological problems due to internet addiction can be prevented as well as coping can be enhanced, if provided awareness and identified at earlier stage.



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Appendices

APPENDIX-1

LETTER SEEKING PERMISSION TO CONDUCT THE MAIN STUDY

To,
Mr. S D D Naidu
Principal,
METAS of SDA Higher Secondary School,
Bariatu Road, Ranchi

Respected Sir/Madam,

Greetings from Shivparvathi Mandradiar Institute of Health Sciences, Palayakottai, Tirupur

Subject: Requisition to avail the permission to conduct Project-Regarding.

This is to certify that 301431852 is a bonafied student of Shivparvathi Mandradiar Institute of Health Sciences, Palayakottai, Tirupur pursuing II year M.Sc. Nursing, under The Tamil Nadu DR.MGR Medical University, Chennai. As a partial fulfillment of University requirement for the award of Master of Science in Nursing Degree, she needs to conduct a research. And she is interested to conduct the study in your esteemed institution. So kindly do the needful and grant her permission to conduct the research study.

Research topic: **"A study to assess the psychological problems among adolescents with internet addiction at selected school, Ranchi."**

The details of the research will be briefed to you by her in person.

Thanking you

Yours sincerely

301431852

APPENDIX- 2

LETTER REQUESTING SUGGESTION FOR ESTABLISHING CONTENT VALIDITY

From,

301431852
II Year M.Sc (N),
Shivparvathi Mandradiar Institute of Health Sciences,
Palayakottai, Tirupur.

To, _____
_____
_____

THROUGH,

The Principal,
Shivparvathi Mandradiar Institute of Health Sciences,
Palayakottai, Tirupur.

Respected Sir/Madam.

Subject: Letter requesting opinion and suggestion from experts for establishing content validity of tool……Regarding

I am a II Year M.Sc Nursing student of Shivparvathi Mandradiar Institute of Health Sciences. As a partial fulfillment of Masters Degree in Nursing, I have selected the topic mentioned below for the research project to be submitted to "The Tamil Nadu Dr. MGR Medical University, Chennai".

Topic: "A study to assess the psychological problems among adolescents with internet addiction at selected school, Ranchi."

I kindly request you to validate the following enclosure and give your expert opinion and suggestions for necessary modifications of the tool.

Thanking you in Anticipation

Place: Yours sincerely

Date: **301431852**

Enclosed here with: 1. Proposal,
2. Structured Questionnaire,
3. Tool

APPENDIX-3

CONTENT VALIDITY CERTIFICATE

I hereby certify that I have validated the tool of 301431852 M.Sc Nursing Student who is undertaking **"A study to assess the psychological problems among adolescent with internet addiction at selected school, Ranchi".**

Signature of the Expert:

Name:

Designation:

Date:

APPENDIX-4

Code No. JH/076

METAS
SEVENTH - DAY
ADVENTIST
HIGHER SECONDARY SCHOOL
(Affiliated to the Council for the Indian School Certificate Examinations, New Delhi)

Ref. No. 2015/246 Date 21/12/2015

From the Principal's Desk

To
The Principal,
Shivparvathi Mandradiar Institute of Health Sciences
Palayokottai – 638108

Sub: Permission granted to Mrs. Shubha Dahanga

Dear Madam,

This is to inform you that Mrs. Shubha Dahanga, D/o. Mr. Johnson Dahanga, the student of your esteemed College, is given permission to conduct research in our institution. May God continue to bless her in her studies and all her endeavors.

God bless your institution as it continues to enlighten more and more students to serve the community around.

Thanking you,

With warm regards,

S D D NAIDU
PRINCIPAL

METAS SDA Higher Secondary School Jharkhand Bariatu Road, Ranchi-834009

Baragain, Bariatu Road, Ranchi - 834 009 (Jharkhand)
Phone / Fax : 0651-2541829 • Mobile : 9199440352 • E-mail : sddnaidusonga@yahoo.in

APPENDIX-5

LIST OF EXPERTS

1. Mrs. Jothimani M M.Sc(N)
   Professor
   Mental Health Nursing
   Shivparvathi Mandradiar Institute of Health Sciences

2. Mrs Leela Devamony M.Sc(N)
   Professor
   Mental Health Nursing
   Florence College of Nursing,
   Bengaluru

3. Mrs. Precilla M.Sc(N)
   Assistant Professor
   Mental Health Nursing
   Shivparvathi Mandradiar Institute of Health Sciences

4. Mr. Manuel Sundaram M.Sc(N)
   Assistant Professor
   Mental Health Nursing
   RVS College of Nursing,
   Salem

5. Mrs. G. Sangeetha
   Psychologist (Professor)
   Shivparvathi Mandradiar Institute of Health Sciences,
   Tirupur

6. Mrs. J. Siblon Bage

Assistant Professor
Mental Health Nursing
METAS of SDA College of Nursing,
Bariatu Road, Ranchi

7. Miss. Lalit Lata Toppo
   Assistant Professor
   Mental Health Nursing
   METAS of SDA College of Nursing,
   Bariatu Road, Ranchi

APPENDIX-6

Participants Consent Form for Participation in Research

I give my consent to participate in the research titled, **"A study to assess the psychological problems among adolescents with internet addiction at selected school, Ranchi"**, which is being conducted by 301431852, II year M.Sc. (N), Shivparvathi Mandradiar Institute of Health Sciences, Palayakottai, Tamil Nadu, as part of her curriculum. I understand that this participation is entirely voluntary; I can withdraw consent at any time. I have understood that-

1. The reason for the research is to assess the psychological problems among adolescents with internet addiction.
2. No discomfort or stresses are foreseen.
3. No risks are foreseen. This choice will not affect my grades.
4. No involuntary procedures are involved.
5. The results of this participation will be confidential.
6. The researcher will answer any further questions about the research, now or during the course of the project, and can be reached by phone at +918051151775/+919786994148

(Please sign both copies of this form. Keep one and return the other to the researcher.)

Signature of the Researcher Signature of the Participant

APPENDIX-7

STRUCTURED INTERVIEW SCHEDULE TO ASSESS INTERNET ADDICTION AND ITS PSYCHOLOGICAL PROBLEMS

INSTRUCTION: This section seeks information about you. There is no right or wrong response. Kindly put tick (√) mark against the correct responses, which best suits you. The interviewer will pose the questions and read the responses one by one.

Code No: ☐

SECTION-I

DEMOGRAPHIC VARIABLES

1. Age
    a) 13-15 years
    b) 16-18 years

2. Gender
    a) Male
    b) Female

3. Education
    a) 9^{th} std
    b) 10^{th} std
    c) 11^{th} std
    d) 12^{th} std

4. Religion
    a) Hindu
    b) Christian
    c) Muslim
    d) Others

5. kind of family system
    a) Nuclear family
    b) Joint family
    c) Extended family
    d) Others

6. Socio-economic status
    a) Low class
    b) Middle class
    c) High class

7. Number of family members
    a) 3
    b) 4
    c) 5
    d) 6 and above

8. Birth order
    a) 1st child
    b) 2nd child
    c) 3rd child
    d) 4th and above

9. Type of recreational activity
    a) Listening to music
    b) Watching TV
    c) Reading books
    d) Other activity

10. Area of living
    a) Urban
    b) Rural
    c) Semi urban

SECTION-II

INTERNET ADDICTION TEST (IAT)

S.NO.	ITEMS	SCORE					
		0	1	2	3	4	5
		Not applicable	Rarely	Occasion-ally	Frequ-ently	Often	Always
1.	How often do you find that you stay online longer than you intended?						
2.	How often do you neglect household chores to spend more time online?						
3.	How often do you prefer the excitement of the internet to spend time with your friends in person?						
4.	How often do you form new relationships with fellow online users?						
5.	How often do others in your life complain to you about the amount of time spend online?						
6.	How often do your grades or school work suffer because of the amount of time spend online?						
7.	How often do you check your e-mail before something else that you need to do?						
8.	How often does your work performance or productivity suffer because of the internet?						

9.	How often do you become defensive or secretive when anyone asks you what you do online?						
10.	How often do you block out disturbing thoughts about your life with soothing thoughts of the internet?						
11.	How often do you find yourself anticipating when you will go online again?						
12.	How often do you fear that life without the internet would be boring, empty and joyless?						
13.	How often do you snap, yell or act annoyed if someone bothers you while you are online?						
14.	How often do you lose sleep due to late-night log-ins?						
15.	How often do you feel preoccupied with the internet when off-line or fantasize about being on-line?						
16.	How often do you find yourself saying "just a few more minutes" when online?						
17.	How often do you try to cut down the amount of time you spend online and fail?						
18.	How often do you try to hide how long you've been online?						

19.	How often do you choose to spend more time online over going out with others?						
20.	How often do you feel depressed, moody or nervous when you are offline, which goes away once you are back online?						

SCORE INTERPRETATION

- 0-30: Normal range.
- 31-49: Mild internet addiction.
- 50-79: Moderate internet addiction.
- 80-100: Severe internet addiction.

SECTION-III

DAS SCALE

DEPRESSION ANXIETY AND STRESS SCALE

S.NO.	ITEMS	SCORE			
		0	1	2	3
		Not at all	Some of the time	Good part of time	Most of the time
1.	I found myself getting upset by quite trivial things.				
2.	I was aware of dryness of my mouth.				
3.	I couldn't seem to experience any positive feeling at all.				
4.	I experienced breathing difficulty.				
5.	I just couldn't seem to get going.				
6.	I tended to over-react to situations.				
7.	I had a feeling of shakiness.				
8.	I found it difficult to relax.				
9.	I found myself in situations that made me so anxious I was most relieved when they ended.				
10.	I felt that I had nothing to look forward to.				
11.	I found myself getting upset rather easily.				
12.	I felt that I was using a lot of nervous energy.				

13.	I felt sad and depressed.				
14.	I found myself getting impatient when I was delayed in anyway.				
15.	I had a feeling of faintness.				
16.	I felt that I had lost interest in just about everything.				
17.	I felt I wasn't worth much as a person.				
18.	I felt that I was rather touchy.				
19.	I perspired noticeably in the absence of high temperature or physical exertion.				
20.	I felt scared without any good reason.				
21.	I felt that life wasn't worthwhile.				
22.	I found it hard to wind down.				
23.	I had difficulty in swallowing.				
24.	I couldn't seem to get any enjoyment out of the things I did.				
25.	I was aware of the action of my heart in the absence of physical exertion.				
26.	I felt down-hearted and blue.				
27.	I found that I was very irritable.				
28.	I felt I was close to panic.				
29.	I found it hard to calm down after something upset me.				
30.	I feared that I would be "thrown" by some trivial but unfamiliar task.				

31.	I was unable to become enthusiastic about anything.				
32.	I found it difficult to tolerate interruptions to what I was doing.				
33.	I was in a state of nervous tension.				
34.	I felt I was pretty worthless.				
35.	I was intolerant of anything that kept me from getting on with what I was doing.				
36.	I felt terrified.				
37.	I could see nothing in the future to be hopeful about.				
38.	I felt that life was meaningless.				
39.	I found myself getting agitated.				
40.	I was worried about situations in which I might panic and make a fool of myself.				
41.	I experienced trembling				
42.	I found it difficult to work up the initiative to do things.				

SCORE INTERPRETATION

	DEPRESSION	ANXIETY	STRESS
NORMAL	0-9	0-7	0-14
MILD	10-13	8-9	15-18
MODERATE	14-20	10-14	19-25
SEVERE	21-27	15-19	26-33
EXTREMELY SEVERE	28+	20+	34+

SECTION-IV

UCLA LONELINESS SCALE
UNIVERSITY OF CALIFORNIA, LOS ANGELES LONELINESS SCALE

S.NO.	ITEMS	SCORE			
		1	2	3	4
		Never	Rarely	Sometimes	Often
1.	How often do you feel unhappy doing so many things alone?				
2.	How often do you feel you have nobody to talk to?				
3.	How often do you feel you cannot tolerate being so alone?				
4.	How often do you feel as if nobody really understands you?				
5.	How often do you find yourself waiting for people to call or write?				
6.	How often do you feel completely alone?				
7.	How often do you feel you are unable to reach out and communicate with those around you?				
8.	How often do you feel starved for company?				
9.	How often do you feel it is difficult for you to make friends?				
10.	How often do you feel shut out and excluded by others?				

SCORE INTERPRETATION

- 15-20: People attaining this score-range are operating comfortably and experience an average level of loneliness.
- 21-30: People within this range struggle a little with social interactions, experiencing frequent loneliness.
- 31-40: Scoring falling within this range would indicate a person experiencing severe loneliness.

SECTION-V

MODIFIED PITTSBURGH SLEEP QUALITY INDEX SCALE

INSTRUCTION: The question relates to your usual sleep habits during the past month. Answer the entire question in most accurate reply.

S.NO.	ITEMS	SCORE			
		1	**2**	**3**	**4**
		High quality of sleep	Moderate quality of sleep	Low quality of sleep	Very low quality of sleep
1.	When have you usually gone to bed at night?	8-9PM	9-10PM	10-11PM	>11PM
2.	How long has it usually taken to fall asleep each night?	≤15 minutes	16-30 minutes	31-60 minutes	>60 minutes
3.	What time have you usually gotten up in the morning?	>7AM	6-7AM	5-6AM	<5AM
4.	How many hours of actual sleep did you get at night?	>7 hours	6-7 hours	5-6 hours	<5 hours
		Not during the past month	**Less than once a week**	**Once or twice a week**	**Three or more times a week**
5.	Have you got problem in getting sleep within 30 minutes?				
6.	Did you wake up in the middle of the night or too early morning?				

7.	Did you have to get up to use the bathroom?				
8.	Did you have breathing problem during night?				
9.	Did you often cough or snore loudly at night?				
10.	Did you feel too cold at night?				
11.	Did you feel too hot at night?				
12.	Did you get bad dreams at night?				
13.	Did you have physical pain which made trouble in your sleeping hours?				
14.	Did you feel the stress in your life as an obstacle to sleep?				
15.	Did you feel that sleep environment is not prompt for you to sleep?				
16.	Did you take coffee or tea at bed time?				
17.	Did you have the habit of taking medicine to fall asleep?				
18.	Did you have trouble in engaging in social activity?				
19.	Did you have difficulty in staying awake during daytime?				

20.	Did you feel your sleeping hours was too disturbed during last month?	Very good	Fairly good	Fairly bad	Very bad

SCORE INTERPRETATION

SCORE	INTERPRETATION
0-20	High quality of sleep
21-40	Moderate quality of sleep
41-60	Low quality of sleep
61-80	Very low quality of sleep